-2984-3302

M/C-A3

REPORT TO U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF WASTE PROGRAMS ENFORCEMENT

REMEDIAL INVESTIGATION
PART 1
SAMPLING PLAN

MONTROSE CHEMICAL SITE
LOS ANGELES, CALIFORNIA

May 1985

Prepared by

METCALF & EDDY, INC.

for

GCA TECHNOLOGY DIVISION

EPA Contract No. 68-01-6769
GCA Subcontract No. 1-625-999-222-02

REPORT TO U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF WASTE PROGRAMS ENFORCEMENT

REMEDIAL INVESTIGATION
PART 1
QUALITY ASSURANCE PROJECT PLAN

MONTROSE CHEMICAL SITE
LOS ANGELES, CALIFORNIA

May 1985

Prepared by

METCALF & EDDY, INC.

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GCA TECHNOLOGY DIVISION

EPA Contract No. 68-01-6769
GCA Subcontract No. 1-625-999-222-02

Approved by:

Robert M. Finn Project Manager, M&E

Edward J. Cichon QA Officer, M&E

Thomas B. Luing 6-6-85 Project Officer, USEPA

Ho L Young 6/6/85 QA Officer, USEPA

4/0 2-6

DHS	POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT	REGION IX	SITE NUMBER (to be assigned by Hq)

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (*Preliminary Assessment*).

I. SITE IDENTIFICATION

A. SITE NAME: Montrose Chemical Co.

B. STREET (*or other identifier*): 20201 South Normandie Ave.

C. CITY: Torrance

D. STATE: CA

E. ZIP CODE: 90502

F. COUNTY NAME: Los Angeles

G. OWNER/OPERATOR (*if known*)

1. NAME: Stauffer

2. TELEPHONE NUMBER: (213) 328 5462

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6 UNKNOWN

I. SITE DESCRIPTION

Active Chemical (DDT) Manufacturing Plant

J. HOW IDENTIFIED (*i.e., citizen's complaints, OSHA citations, etc.*)

Referral from Sanitation Inspector

K. DATE IDENTIFIED (*mo., day, & yr.*): 01/21/81

L. PRINCIPAL STATE CONTACT

1. NAME: Joe Stock

2. TELEPHONE NUMBER: (916) 322 5565

II. PRELIMINARY ASSESSMENT (*complete this section last*)

A. APPARENT SERIOUSNESS OF PROBLEM

☒ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4 NONE ☐ 5 UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (*no hazard*)

☒ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION

1. NAME: Joe Stock

2. TELEPHONE NUMBER: [illegible]

3. DATE (*mo., day, & yr.*): 5/22/81

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE (*Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.*)

☐ 2. INACTIVE (*Those sites which no longer receive wastes.*)

☐ 3. OTHER (*specify*):
(*Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.*)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (*specify generator's four-digit SIC Code*):

C. AREA OF SITE (*in acres*): ~ 40

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (*deg.—min.—sec.*)

2. LONGITUDE (*deg.—min.—sec.*)

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (*specify*):

EPA 2070A (3/80) Continue On Reverse

...Front

IV. CHARACTERIZATION OF SITE ACTIVITY

...ate the major site activity(ies) and ... ciating to each activity by marking 'X' in ... opriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY	✓	8. OTHER (specify):
					9. OTHER (specify):		Sewer line "plug"

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

approximatly 74,000 lbs of powdered DDT is clogging the sewer line near the plant

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☐ 2. LIQUID ☐ 3. SOLID ☒ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify): ____

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT 74,000	AMOUNT	AMOUNT	AMOUNT 74,000	AMOUNT	AMOUNT
UNIT OF MEASURE pounds	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE pounds	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify)	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify)	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			✓ (4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
☒ (5) OTHER (specify): DDT in POTW line			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify)
			(6) CYANIDE	(6) OTHER (specify)	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

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BOE-C6-0178062

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

DDT , DDE

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

Also possibility of soil contamination near holding pond

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo.,day,yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY (ocean outfall)	X			ocean outfall
6. CONTAMINATION OF FOOD CHAIN	X			
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA	X			
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	X			around pond
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS	X			
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continue On Reverse

...d From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify):
- [ ] 4. AIR PERMITS
- [x] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify):

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): current sewerage

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [x] B. YES (summarize below)

wastewater treatment has been up-graded because of lawsuit

IX. INSPECTION ACTIVITY (past or on-going)

- [x] A. NONE
- [ ] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- [ ] A. NONE
- [ ] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

DHS

POTENTIAL HAZARDOUS WASTE SITE TENTATIVE DISPOSITION

REGION	SITE NUMBER

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
MONTROSE	20201 S. NORMANDIE	
C. CITY	D. STATE	E. ZIP CODE
TORRANCE	CA	90502

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED — NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X				
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*	X				
D. ENFORCEMENT ACTION NEEDED	X	X			

E. RATIONALE FOR DISPOSITION

DDT could be flushed through POTW at any time.

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*

G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo., day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

T-2145 (3/81)

Continue on Reverse

DHS

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
C. CITY	D. STATE	E. ZIP CODE

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

EH 2150 (2-80)

DHS

POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IX

SITE NUMBER (to be assigned by Hq)

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment).

I. SITE IDENTIFICATION

A. SITE NAME: MONTROSE CHEMICAL CO.

B. STREET (or other identifier): 20201 South Normandie Ave.

C. CITY: Torrance

D. STATE: CA

E. ZIP CODE: 90502

F. COUNTY NAME: LOS ANGELES

G. OWNER/OPERATOR (if known)

1. NAME: STAUFFER

2. TELEPHONE NUMBER: (213) 328 5462

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: ACTIVE CHEMICAL (DDT) MANUFACTURING PLANT

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.): REFERRAL FROM SANITATION INSPECTOR

K. DATE IDENTIFIED (mo., day, & yr.): 01/01/81

L. PRINCIPAL STATE CONTACT

1. NAME: Sid Stock

2. TELEPHONE NUMBER: (916) 322 5505

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☒ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☒ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: Sid Stock

2. TELEPHONE NUMBER: (916) 322 [illegible]

3. DATE (mo., day, & yr.): 5/22/81

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres): ~ 40

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify):

BOE-C6-0178067

Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL	✓	1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY	✓	8. OTHER (specify): Sewer line "plug"
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

approximately 74,000 lbs of powdered DDT is clogging the sewer line near the plant

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☐ 2. LIQUID ☐ 3. SOLID ☒ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT 74,000	AMOUNT	AMOUNT	AMOUNT 74,000	AMOUNT	AMOUNT
UNIT OF MEASURE pounds	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE pounds	UNIT OF MEASURE	UNIT OF MEASURE
(1) PAINT, PIGMENTS	(1) OILY WASTES	(1) HALOGENATED SOLVENTS	(1) ACIDS	(1) FLYASH	(1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify)	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify)	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			✓ (4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
☒ (5) OTHER (specify): DDT in POTW line			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify)
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

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... WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

DDT , DDE

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

Also possibility of soil contamination near holding pond

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY (ocean outfall)	X			ocean outfall
6. CONTAMINATION OF FOOD CHAIN	X			
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA	X			
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	X			around pond
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS	X			
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify)				

Continue On Reverse

BOE-C6-0178069

...ded From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify):
- [ ] 4. AIR PERMITS
- [x] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify):

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): current sewerage

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [x] B. YES (summarize below)

wastewater treatment has been up-graded because of lawsuit

IX. INSPECTION ACTIVITY (past or on-going)

- [x] A. NONE
- [ ] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- [ ] A. NONE
- [ ] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

DHS

POTENTIAL HAZARDOUS WASTE SITE TENTATIVE DISPOSITION

REGION	SITE NUMBER

I. SITE IDENTIFICATION

A. SITE NAME MONTROSE	B. STREET 20201 S. NORMANDIE
C. CITY TORRANCE	D. STATE CA — E. ZIP CODE 90502

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED — NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X				
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*	X				
D. ENFORCEMENT ACTION NEEDED	X	X			

E. RATIONALE FOR DISPOSITION

DDT could be flushed through POTW at any time.

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*

G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo., day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

[illegible] 2159 (7/81)

Continue On Reverse

Daily Breeze Torrance California

Residents oppose plans for burying tainted soil

1-31-89

By Warren Robak
Staff writer

People living near what was once the world's largest DDT manufacturing plant told federal officials Monday they oppose plans that call for burying large amounts of the banned pesticide at the site.

"The plan ... doesn't take us into consideration," said Linnea Samane, a community activist. "I don't think covering it up is a good idea. It's the cheapest, but it's not good for us."

County health officials also opposed the plan, saying the DDT-laden soil should be removed.

The U.S. Environmental Protection Agency has proposed allowing the Montrose Chemical Corp. to leave large amounts of the contaminated soil at its closed Torrance-area plant, capping it with concrete and asphalt as a means of isolating the chemical.

Because DDT adheres to soil particles, officials say, it will be safe to cover the site so soil does not come into contact with rain or other chemicals. There is little chance the pesticide could filter down into ground water supplies, they say.

Once widely used in agriculture, DDT is a suspected human carcinogen that is of particular concern to

Soil / A8

Soil

From page A1

scientists because it accumulates in the environment and is passed from one species to another.

Keith Takata, chief of the EPA's regional Superfund programs branch, said at a community meeting the agency is not committed to the capping approach.

"We will have to come up with a more refined recommendation before we make a decision," he said. "I see the need for a lot more study."

Residents told officials they want consideration given to removing the DDT from their neighborhood, where small amounts of the pesticide have been found. It is assumed that the DDT got into the neighborhood from the plant's air emissions.

"The bigger problem of aerial fallout is a difficult issue," said Takata. "I think we need to look at that independent of the other problem."

Angelo Bellomo, regional chief of the state Department of Health Services' Hazardous Substance Control Division, said tests will be conducted in the neighborhood.

"It's real clear to us that sampling off-site needs to take place," Bellomo said. "It's unfortunate that our agency has been slow to take part."

Neighborhood residents also criticized plans to have Montrose regularly check the proposed cap for cracks.

"We are not for self-policing by the same people who polluted us," Samane said. "That is like having the wolf guard the sheep."

The EPA took action against Montrose in May after it discovered large amounts of DDT washing off the plant property and running down flood control channels to Los Angeles Harbor. The plant, on Normandie Avenue near Del Amo Boulevard in the Los Angeles city strip, was demolished after being closed in June 1982.

Tests have found that some dirt at the 13-acre site is nearly 10 percent DDT.

Montrose has proposed capping the site and then building warehouses.

It's estimated that it would cost $3 million to remove soil contaminated with DDT down to levels of 5 parts per million — the same level found in the nearby neighborhood.

Montrose Chemical Corporation of California

One Metro Plaza (Suite 301)
505 Thornall Street • Edison, New Jersey 08837 • (201) 494-7522

M/C-A-5
~~EPG~~ 7/3
-LAS

January 30, 1984

H2/2

Mr. Tom Severino
United States Environmental
Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Re: EPA Region IX, Section 106/3013
Order No. 83-01

Dear Mr. Severino:

On June 23, 1983, Montrose Chemical Corporation of California ("Montrose") submitted a proposed remedial plan ("Montrose's Proposal") in the referenced action. In subsequent discussions between Montrose and Region IX, EPA, the Agency requested modifications and additional data, which Montrose submitted by letters dated July 27, 1983 and August 31, 1983.

On September 30, 1983, representatives of Montrose and EPA met to discuss Montrose's modified proposal. At this meeting, Metcalf & Eddy, a technical consultant retained by EPA to review Montrose's Proposal, offered various comments and suggestions concerning the proposal. Metcalf & Eddy's suggestions subsequently were compiled in written form and an advance draft copy of the document entitled "Review of Proposed Response to EPA Enforcement Order No. 83-01, November, 1983" (the "Metcalf & Eddy Report") was provided to Montrose for its review.

On December 13, 1983 representatives of Montrose and EPA again met to discuss various aspects of Montrose's Proposal and Metcalf & Eddy's evaluation of the proposal. The Metcalf & Eddy recommended modifications to Montrose's proposal were summarized in Table 5 at page 19 of the Metcalf & Eddy Report, and provided the focus for discussions during the December meeting. In that meeting, agreement was reached on several of the points raised in the Metcalf & Eddy Report. On several other points involving purely technical questions, EPA expressed a desire to study Montrose's technical responses further. Finally, a limited number of issues were determined to involve purely policy-oriented considerations.

At the conclusion of the December meeting, EPA requested Montrose to transmit in writing the responses provided during the meeting. The purpose of this letter is to comply with that request. Montrose's responses are keyed to Table 5 in the Metcalf & Eddy Report. A copy of Table 5 is included as Attachment 1 hereto, and each of the recommended modifications has been assigned a sequential numeric designation for easy reference. As was evidenced during the December meeting, Montrose and EPA appear to be in substantial agreement with several of the recommendations made by Metcalf & Eddy, including recommendations 1, 3, 5, 9, 14, 15, 17 and 18. Regarding recommendations 2, 7, 10, 11, 12 and 13, the issues outstanding appear to be purely technical in nature. Only on recommendations 6, 8 and 16 does there appear to be any policy-oriented difference of opinion between Montrose and EPA. A detailed discussion of each recommendation is set forth as Attachment 2 to this letter.

As soon as you have had an opportunity to review these comments, we recommend an early meeting between the parties to finalize agreement on the remedial plan to be implemented at the Torrance facility, and to negotiate the terms of an appropriate consent order.

Thank you for your cooperation and we look forward to your early response.

Very truly yours,

MONTROSE CHEMICAL CORPORATION
OF CALIFORNIA

Samuel Rotrosen
Samuel Rotrosen
President

cc: Raymond M. Hertel
Executive Officer
California Regional Water
Quality Control Board

Attachment 1

Table 5. RECOMMENDED MODIFICATIONS TO MONTROSE CHEMICAL CORPORATION'S PROPOSED CAPPING PLAN

ONSITE REMEDIAL MEASURES

General Provisions

1 • Establish worker safety program, including air monitoring.

2 • Deed restriction, including maintenance program.

Surface Sealing Provisions

3 • Improve cap on western 3 acres.

4 • Seal aggregate base for buildings before rainy season.

5 • Existing contaminated concrete should not be reused in fresh concrete.

Stormwater Provisions

6 • Construct detention basin to prevent sediment from leaving site.

7 • Monitor runoff periodically for DDT.

8 • Modify curb design to prevent run-on from any exposed soil or parking lots.

9 • Buried high pressure liquid pipelines should be installed in concrete box culvert (e.g., fire mains, water supply lines).

10 • Size all stormwater collection/conveyance structures for 100-yr storm.

11 • Evaluate soils for corrosivity before selecting pipe materials.

12 • Convey stormwater via buried pipelines rather than open channels.

13 • Route pipelines around buildings, not beneath.

14 • Make all pipelines infiltration/exfiltration-proof.

OFFSITE REMEDIAL MEASURES

15 • Immediately provide temporary fencing around areas >5 ppm DDT

16 • Easements should be either:
- Excavated to local background DDT level, or
- Sealed with synthetic liner and clean soil

17 • Convey Montrose runoff directly to city storm drain instead of to another private property.

18 • Remove contaminated sediment from Farmer Brother's Coffee catchbasin.

Attachment 2

I. ONSITE REMEDIAL MEASURES

A. General Provisions

1. Establish worker safety program, including air monitoring.

EPA is concerned that adequate provision be made for worker safety during demolition operations onsite and while contaminated soils are being excavated offsite. During the December meeting, EPA indicated that it would require the same safety measures as were in force when the facility was operational.

Montrose agrees with this recommendation. An effective worker safety program for employees and contractor personnel has been adhered to during all demolition work to date, and will continue to be provided pursuant to existing company policy and applicable law until capping of the site and excavation offsite are completed. Although specific precautions for each phase of work are the primary responsibility of the various subcontractors most familiar with their specific tasks and the hazards associated with performing these tasks, overall supervision of the safety program during demolition and capping will be provided. The site will be watered during grading, paving and capping operations to adequately control dust.

2. Deed restriction, including maintenance program.

A proposed form of notice to be recorded with the County Recorder is attached as Exhibit A. Maintenance measures to ensure cap integrity will be implemented as specified in Exhibit B.

B. Surface Sealing Provisions

3. Improve cap on western 3 acres.

Montrose agrees that the cap design on the western portion of the property should be modified to specify the use of a two-inch asphalt layer over a four-inch aggregate base for the westerly 3 acres of the site, rather than the originally specified two-inch concrete cap. Additionally, an asphaltic concrete wearing surface over aggregate base will be used in all other areas not covered by buildings or concrete pavement.

4. Seal aggregate base for buildings before rainy season.

Because of the extended delay in finalizing approval of the proposed remedial plan, sealing of the aggregate base could not be accomplished before the rainy season and is not necessary in any event.

Any risk of stormwater erosion and runoff of potentially contaminated materials from the site has been eliminated on an interim basis by construction of an asphaltic-covered earthen berm along the southern and eastern edge of the property. This berm has proved effective in containing runoff and should continue to do so until construction of the cap is complete.

5. Existing contaminated concrete should not be reused in fresh concrete.

Montrose agrees with this recommendation and will use only fresh ready-mixed concrete purchased from outside vendors. Onsite materials will not be used as an ingredient of concrete installed at the site, and subcontractor specifications will so state.

C. Stormwater Provisions

6. Construct detention basin to prevent sediment from leaving site.

EPA has recommended construction of an onsite detention basin to entrap DDT-contaminated sediments which otherwise might leave the site during a significant storm event. Because the complete surface sealing and capping proposed by Montrose will preclude contact between stormwater runoff and underlying soils, contaminated sediments should not be present in storm-water runoff from the site. Not even a major storm event, by itself, will damage the asphalt/concrete cap or cause erosion of the subsurface soils.

Although EPA apparently agreed with this during the December meeting, concern was expressed about the possibility of an earthquake or other precipitous event occurring at or near the site which might rupture the underground water distribution system. Were this to occur, EPA speculated that, in the worst case, a water line could be completely severed under full pressure causing a discharge of water into contaminated subgrade until the main water line could be shut down. Were this event simultaneously to cause a breach of the cap and be accompanied by an intense rain event, contaminated soils could be conveyed to the surface of the cap and carried offsite by stormwater runoff. EPA apparently believes that construction of a detention basin would effectively entrap any such contaminated sediments and prevent their being carried offsite.

Montrose believes the possibility of such an event occurring is remote at best. Nevertheless, because Montrose is prepared to install the water distribution system within concrete culverts (see discussion at ¶9 following), any such remote possibility of simultaneous cap rupture and failure of underground lines conveying contaminated soils to the surface will be eliminated. Construction of a detention basin on the site therefore is unnecessary. Regular inspection and maintenance of the cap will effectively ensure that its integrity is maintained, and that subsurface sediments are not released through the cap where they may be conveyed offsite during a storm event.

7. Monitor runoff periodically for DDT.

Montrose agrees with this recommendation subject to certain conditions. Following construction of the cap, it is recommended that periodic monitoring during the rainy season be performed of stormwater runoff from the site for a one-year period. If no contamination is evidenced in the samples, two additional annual samples should be taken, at which point monitoring will terminate. Monitoring for DDT contamination onsite also provides an added measure of protection to ensure the integrity of the cap following its initial construction. Once periodic monitoring has established the integrity of the cap seal, its long-term integrity can be determined by routine inspections of the surface and prompt repair of any voids in the pavement.

8. Modify curb design to prevent run-on from any exposed soil or parking lots.

EPA recommends construction of perimeter curbing along those borders of the site which otherwise might receive stormwater run-on from adjoining properties. During the December meeting, EPA indicated that the purpose of this was to minimize the possibility of erosion of the onsite cap, and to eliminate any risk of offsite contamination being carried onto the site. Both technical and legal considerations preclude construction of such a perimeter curb. Additionally, so long as adequate measures are taken to insure cap integrity, elimination of the risks alluded to above is unnecessary.

Assuming that a massive perimeter curb could be erected along the northern boundary of the site, this would result in diversion of stormwater runoff from the McDonnell Douglas property to the north onto Normandie Avenue. Alternatively, if a perimeter curb were constructed in conjunction with a storm drain to convey stormwater run-on from McDonnell Douglas to the interceptor drain south of Farmer Brothers, diversion of stormwater run-on to this location would merely aggravate the ponding of water in the area of Farmer Brothers because the intercept drain south of Farmer Brothers is sized for a very small storm event.

Since stormwater runoff from the McDonnell Douglas property historically has drained onto and across the Montrose facility, this "drainage easement" could not be impaired without altering existing legal rights and duties between adjoining property owners. (See Latham & Watkins' memorandum attached as Exhibit C.) It appears highly unlikely that the City of Los Angeles would permit additional stormwater to accumulate on Normandie Avenue, and additional ponding and accumulation of water in the easement areas south of the site adjacent to Farmer Brothers are not desirable.

As presently designed, the perimeter curbing is not intended to prevent stormwater from entering the site. The primary purpose of the curb is to maintain the integrity of the outer edge of the pavement and to provide vertical grade separation, rather than to divert stormwater run-on from the McDonnell Douglas property or to provide a drainage channel for water. Although this perimeter curb will divert low volume water run-on from adjacent properties onto the site, it will have no measurable effect during a heavy rainfall event. In any event, due to the large drainage area adjoining the site, it is unlikely that a wall or curb could effectively prevent water from running onto the site without severely impeding vehicle access to and egress from the site.

Most importantly, as long as cap integrity onsite is properly maintained through periodic inspection and repair, there is no practical risk of erosion of the cap from surrounding properties' stormwater run-on to the site.

9. Buried high pressure liquid pipelines should be installed in concrete box culverts (e.g., fire mains, water supply lines)

The water distribution system proposed for the site is not a high pressure system. Existing water pressure in this area of Torrance is approximately 70 pounds per square inch. The materials proposed for use in this system are designed to withstand the combination of internal pressure and flexural loading far in excess of anything that could be reasonably anticipated to occur. The internal design pressure for the pipe is approximately 600 psi and the external loading is 7,000 pounds per lineal foot. The material proposed for use, Type II transite cement pipe, is resistant to chemical corrosion as well as electrolysis. The fittings proposed are cast iron mechanical joint compression fittings, coated with asphalt and lined with cement mortar to reduce the possibility of corrosion to a minimum.

Constructing the system underground in a conventional manner provides additional strength as a result of off-setting loads, since the weight of the soil surrounding the pipe offsets the internal pressure within the pipe. Flexible pipe joints surrounded by earth will flex more easily when thrust from a water hammer occurs or a mild earth disturbance stresses the pipe system. In addition, the soil insulation surrounding the pipe serves to modulate temperature variations and keep the water cooler, thus reducing the chances of bacterial contamination which can accelerate in partially stagnant lines which are not continuously circulating.

Although constructing the system within a concrete structure will add a rigid layer of material between the pipe and the surrounding earth, this rigid layer will not eliminate the need for monitoring or maintenance of the water system (which in fact will be somewhat more difficult).

EPA has stated that concrete culverts will reduce the possibility that a simultaneous rupture of the water distribution system and the cap seal might cause contaminated material to be washed to the surface of the cap, and then be conveyed into the storm drain system. The only events likely to cause serious rupture in the cap seal at the surface that would simultaneously cause piping to fracture would be an earthquake or other cataclysmic "act of God." In such an event, the system is valved and can be shut down easily by anyone familiar with the water system. Moreover, a complete break in the piping is not likely to occur except in an event of a magnitude such that the concrete structure also would be likely to fracture at the same time.

Based purely on engineering design considerations, Montrose would question the wisdom of EPA's recommendation. It is apparent, however, that placement of piping in concrete culverts would simplify other remedial program design considerations. For example, the need for any form of detention basin (recommendation 6) is eliminated altogether. Evaluation of soils for corrosivity (recommendation 11) is no longer required, and the fabrication of infiltration/exfiltration-proof pipelines (recommendation 14) is greatly simplified. Montrose therefore is prepared to install the water distribution system onsite in concrete culverts. The added costs of doing this can be offset to some extent by the cost savings to be realized by eliminating any need to implement recommendations 6, 11 and 14.

10. Size all stormwater collection/conveyance structures <u>for 100-yr storm</u>.

Montrose believes that this recommendation is technically infeasible and unjustified. Design of the onsite stormwater management structures must take into account the downstream facility design capacity. The Los Angeles County Flood Control District storm drain immediately south of the site on Normandie Avenue which will receive stormwater runoff from the site is 24 inches in diameter. Laid at the flat grade available in the area, the capacity of this pipe system is less than 15 cubic feet per second of runoff. That capacity is exceeded by a five-year storm over 6 acres of watershed. Since the onsite watershed is approximately 13 acres, and the watershed of adjacent properties is several times greater than that, design of the stormwater management structures onsite to anything greater than a five-year storm capacity accomplishes nothing. In fact, even this design standard is excessive, since the outlet of the catch basin on the east side of Normandie Avenue is only an 18-inch diameter drain pipe.

The storm drain system presently proposed will convey runoff from the site directly to the County storm drain on Normandie Avenue. Because there is no other storm drain to convey runoff to the regional system, construction of onsite curbing and related stormwater facilities to a 100-year storm design will not alter the discharge of stormwater into the regional system. During a 100-year storm, the site would be almost immediately submerged, and would store excess water until the downstream regional system can convey it away. Any runoff which exceeds the downstream system capacity simply will accumulate onsite until the storm event abates. Accordingly, increasing the capacity of onsite stormwater management structures above the design capacity of the downstream system will not have any effect on the site or surrounding properties during a major storm event.

A 100-year design capacity would not seem appropriate in any event, since the Los Angeles County Flood Control District uses a 50-year storm event as a maximum design for major flood control projects within its jurisdiction only where the danger of flooding is sufficient to justify the costs of larger structures. So long as runoff from McDonnell Douglas is not diverted onto Normandie Avenue where it might periodically inundate the road and make it unpassable for vehicle traffic, the danger of flood damage in the area surrounding the site appears minimal and there is no need for any change in system design over that presently proposed.

11. Evaluate soils for corrosivity before selecting pipe materials.

Because the water distribution system will be encased in culverts (see paragraph 9 above), evaluation of soils for corrosivity is unnecessary.

12. Convey stormwater via buried pipelines rather than open channels.

As discussed previously, because of the limited capacity of the downstream storm drain system, any onsite system, whether above ground or underground will be correspondingly limited in size, and rely primarily on the holding capacity of the site in the surrounding area to manage the ultimate discharge of storm events exceeding the downstream system capacity. Conveyance of a relatively limited amount of stormwater via buried pipelines will not materially enhance stormwater management capacity onsite, and will be far more difficult to inspect and maintain. Once the underground pipelines fill with water because of the limited receiving capacity of the downstream system, above ground flooding will occur in any event.

Any attempt to collect and convey stormwater through underground piping would merely increase the possibility of interaction between stormwater runoff and subsurface areas beneath the surface cap should any damage or deterioration occur to subsurface piping. If EPA is concerned to preclude stormwater runoff from interacting with subsurface soils, stormwater runoff should be maintained on the surface of the cap, where the asphaltic concrete cap can function most effectively in conveying stormwater runoff and eliminating the possibility of erosion of contaminated soil.

13. Route pipelines around buildings, not beneath.

This recommendation apparently is premised on a misunderstanding of the piping system proposed at the site. The 30-inch pipe which EPA understood would be placed under the warehouse buildings will be constructed above the groundlevel concrete/aggregate slab, but beneath the elevated floor of the warehouse. The 30-inch pipe will be laid in a slurry bed between the above-ground slab and the elevated floor of the warehouse, and will be sized to allow access for inspection purposes. As such, this construction design will not in any way risk compromising the integrity of the asphaltic/concrete capping material. The flow line of the pipe is set at the same elevation as the flow line of the exterior surface improvements. Accordingly, there is no risk of infiltration to the pipe since it will be at the same level as the surrounding surface.

14. Make all pipelines infiltration/exfiltration-proof.

Montrose generally agrees with this recommendation. The specifications for materials and construction methods will provide for prevention of infiltration and exfiltration at joints, transitions, etc., taking into account the fact that the water distribution system will be installed in concrete culverts (see paragraph 9 above). The sanitary sewer will be constructed with standard slip-on joints which should prevent infiltration under the conditions expected to be present at this project. The system will be tested for leaks using standard methods. The materials used for the joints are resistant to chemical corrosion.

II. OFFSITE REMEDIAL MEASURES

15. Immediately provide temporary fencing around areas greater than 5 ppm DDT.

The apparent purpose to be served by fencing offsite areas which contain trace amounts of contaminated soils is to preclude casual access by persons living or working in the area. However, DDT is not an acutely toxic substance, and the only alleged health risk ever attributed to it by EPA is the risk of bioaccumulation in animal organisms. Since skin contact with soils containing low levels of contamination does not represent any actual or potential health risk, there appears to be no reason to limit access to relatively dormant areas where DDT exists in very low concentrations in the soil.

However, inasmuch as the northern, western and southern sides of the onsite and offsite areas already are fenced, Montrose will install temporary fencing on the eastern side of the property parallel to and immediately west of the Southern Pacific Railroad tracks, subject to obtaining appropriate consents from adjoining property owners. In addition, while surface soil work and improvement of the offsite storm drainage system is being conducted, appropriate measures will be used to control access to the offsite area and to minimize the risk of injury to bystanders or trespassers. Finally, the 24-hour security guard stationed onsite will be directed to discourage trespassers from the general area.

16. Excavation of easement area to local background DDT level or sealing with synthetic liner and clean soil.

Montrose believes that neither technical justifications nor health considerations warrant excavation of DDT-contaminated materials offsite on anything other than a very limited basis. With the exception of sample point number 27 (DDT concentration of 1,900 ppm at two feet below grade level), all DDT readings in the offsite area above 500 ppm occur along the natural drainage flowline from the site southerly to the Farmer Brothers property. Surface contaminations of DDT are generally very low in the offsite area, and in many cases are below the concentrations measured in croplands and orchards where DDT has been used as a traditional pesticide in many parts of the country (see, Pesticide Monitoring

Journal, Vol. 12, No. 3, Dec. 78, pp. 120-136; and Vol. 4, No. 3, Dec. 1970, pp. 145-165). As noted above, since DDT is not an accutely toxic substance, and does not pose any health risk from skin contact (indeed, DDT has been applied to the human skin in 10% concentration [100,000 ppm] as a delousing agent throughout the United States and is still widely used by the World Health Organization for this purpose), no health risk exists from the mere presence of DDT in offsite soils.

Excavation of DDT-contaminated soils is appropriate only in those areas which may be susceptible to erosion from stormwater runoff and some material risk exists that such stormwater runoff would convey significant amounts of contaminated soils into the regional storm drain system. Accordingly, Montrose proposes to excavate soil along the drainage swale running south to the Farmer Brothers property where concentrations of DDT are the highest and a substantial probability exists that erosion may convey these contaminated soils into the regional system. In easement areas outside the distinguishable drainage path where water during a storm event does not move with sufficient velocity to cause appreciable erosion, excavation of soils to local background DDT levels is unnecessary to avoid any human health risk and is not cost-effective.

With respect to EPA's alternative recommendation, namely sealing with a synthetic liner and overlaying with clean soil, this recommendation is impractical in view of the needs of existing owners of easement rights to obtain access to their underground easements. In order to reach underground pipelines, it would be necessary to penetrate any synthetic liner placed in the offsite areas. Moreover, installation of a synthetic liner and a topping of clean soil would only be necessary if there were evidence of historic erosion of the soils outside the drainage path running along the eastern edge of the offsite easement area which parallels the Southern Pacific Railroad right-of-way. Since no such evidence exists, this synthetic liner is unnecessary as long as selective excavation is accomplished in the drainage path where water is moving with measurable velocity during a storm event.

17. Convey Montrose runoff directly to city storm drain instead of to another private property.

Montrose concurs with this recommendation, and presently is preparing plans to connect the drainage channel coming off its property at the southeast corner directly to the public storm drain on Normandie Avenue. This will bypass the catch basin in the parking lot of Farmer Brothers to the extent possible. However, as previously mentioned, the capacity of any improvements to the storm system are limited by the capacity of the existing downstream storm drain. It therefore is impossible to prevent all stormwater runoff which passes through the site from ponding on the Farmer Brothers property during a heavy storm. However, the direct pipeline will be effective in the early stages of a storm, and during small storm events. In major storms when the capacity of the downstream storm drain is exceeded, stormwater will seek the easiest path downstream and will be conveyed both directly and through the Farmer Brothers catch basin.

18. Remove contaminated sediment from Farmer Brothers Coffee catch basin.

Montrose concurs with this recommendation. The catch basin will be cleaned and sediment properly disposed of.

Exhibit A

Recording Requested by:

When Recorded Mail To:

A.P.N. _______________

The undersigned declares that the documentary transfer tax is $-0-.

The land is located [in the City of __________,] [an unincorporated area] in the County of ______________, State of California.

NOTICE OF CONSENT ORDER

THIS NOTICE OF CONSENT ORDER (the "Notice") is made as of ______________, 19__, by and between ______________________ ("Owner"), and ______________________ ("EPA"), as follows:

1. The real property which is the subject of this Notice is described in Exhibit "A" attached hereto (the "Real Property").

2. This Notice is executed concurrently with the execution by and between Montrose Chemical Corporation of California, EPA, [and Owner] of that certain Consent Order in the enforcement action numbered U.S. EPA, Region 9, Docket No. 83-01, of even date herewith, which affects the Real Property.

3. For additional information, contact EPA, [address], [telephone number].

IN WITNESS WHEREOF, the Owners and EPA have executed this Notice as of the date first above written.

OWNER:

____

EPA:

____

Exhibit B

Ongoing Maintenance Program to Preserve Cap Integrity

Upon completion of capping at the Montrose - Torrance facility, the integrity of the surface seal will be assured by the following measures:

(1) excavation or penetration into the asphalt/concrete cap for repair or maintenance purposes will be permitted only during the non-rainy season (excepting an emergency), or if the excavation is protected by temporary roofing and sandbagging or a temporary berm to eliminate any risk of erosion and contamination of stormwater runoff from exposed subsurface soils;

(2) weekly walkarounds of the site will be conducted by onsite management, supplemented by quarterly inspections done by a paving contractor to identify any potential or developing problems with surface integrity, including cracks, erosion spots, surface spalling, etc.;

(3) immediately upon noting any surface problems during regular inspections, corrective action will be authorized pursuant to the terms of a service-type repair and maintenance contract with a paving contractor. Corrective action will include asphalt/concrete removal, patching and/or complete area replacement as necessary, dependent on the circumstances involved; and

(4) in addition to the above steps, at regular intervals a sealing compound will be applied to asphalt surfaces, weed growth will be eliminated from concrete joints, and redwood expansion strips and/or bitumen-type joint sealer will be replaced as required.

Exhibit C

LATHAM & WATKINS
ATTORNEYS AT LAW
701 "B" STREET, SUITE 2100
SAN DIEGO, CALIFORNIA 92101
TELEPHONE (714) 236-1234

TO: David L. Mulliken

DATE: January 20, 1984

FILE NO.: 11427-001

FROM: Paul I. Meyer

COPIES:

SUBJECT: Drainage Easements

SUMMARY

You have asked me to advise you of the California law applicable to "drainage easements" which may impact upon the design of the stormwater run-off system at Montrose's Torrance facility.

In summary, the following three principles are relevant:

1. Drainage easements in favor of upper landowners, such as McDonnell Douglas, do exist as a matter of California law. Montrose cannot impair them.

2. Montrose can continue to enjoy its own drainage easements over lower lands, such as those owned by the Los Angeles Department of Water and Power, Southern Pacific Railroad and Farmer Brothers, but only by discharging its surface waters across those lower lands in a natural manner. If Montrose collects its surface water into pipes or by other artificial

means before discharging it onto the lower lands, it will be liable under California law for damages caused to the lower landowners.

3. Governmental agencies that have substantial involvement in the designing or planning of drainage systems may be held liable for the damage that such systems cause to upper or lower landowners, even if the systems are constructed and owned by private entities.

DISCUSSION

The legal bases for these conclusions are established principles of California drainage law, imposing substantial duties upon Montrose to both upper and lower landowners.

1. As an upper landowner, McDonnell Douglas:

> ". . . has a legal and a natural easement or servitude on the lower or servient estate [the Montrose property] to discharge all surface waters naturally falling or accumulating on his land onto or over the land of the servient owner in the manner in which they would naturally flow from a higher to a lower level.
>
> . . .
>
> Since every landowner must bear the burden of receiving on his land the surface water naturally falling or accruing on the land above it, he may not obstruct such a flow to the injury of the owner of the land from which the waters come. The owner of a lower estate is answerable in damages for any injury he may cause to the estate of an upper owner by reason

> of obstructing the flow of surface waters by an enbankment or other obstruction to the natural flow, thus causing it to back up or remain on the land of the upper proprietor."

63 Cal. Jur. 3d, Water §§ 707 and 715; see also, Gonella v. Merced, 153 Cal. App. 2d 44 (1957).

2. With respect to the lower landowners, including the Los Angeles Department of Water and Power, Southern Pacific Railroad and Farmer Brothers, Montrose has a right to discharge surface waters in the manner in which they would naturally flow, but has no right to divert surface waters onto the lower lands by artificial means, such as by collection into pipes or artificial channels to the injury of the lower landowners. See, e.g., San Gabriel Valley Country Club v. County of Los Angeles, 188 Cal. 392 (1920); Inns v. San Juan Unified School District, 22 Cal. App. 2d 174 (1963).

> ". . . And every [lower] landowner has a lawful right to complain of others who, by interfering with natural conditions, cause surface water to be discharged in greater quantity or in a different manner onto his land than would occur under natural conditions. No landowner may gather surface waters together on his land and discharge them onto lower lands to the injury of such lands, either in greater volume or in a different manner than they would naturally be discharged."

63 Cal. Jur. 3d, Water § 708 (emphasis added).

3. Governmental agencies that participate substantially in the planning, design, construction or maintenance of drainage systems that cause damage to upper or lower landowners, are directly liable under California law to compensate for the damages resulting from their exercise of governmental power:

> "Where a landowner has a right of action against a private party who presents a drainage plan that dumps water on a portion of the landowner's property that is not a part of the natural drainage basin, he likewise has a right of action against the city that approves the plan."

Id., § 712; see also, Sheffet v. County of Los Angeles, 3 Cal. App. 3d 720 (1970).

As a result, EPA and Montrose have a mutual interest in avoiding any drainage plan that artificially changes the natural flow of water from the McDonnell Douglas property onto and across the Montrose site.

SEP 2 6 1983

RECOMMENDED FIELD PROCEDURES
FOR
DEL AMO SITE SAMPLING PROGRAM

To clearly specify the Department's requests concerning the sampling program proposed for the week of September 26, 1983, staff has submitted the following procedures (to be implemented in conjunction with previous recommendations):

SITE CHARACTERIZATION

Lots 12 and 13:

- As previously discussed, borings will be centered on a 200 foot grid system. The location of each borehole on the grid lines will be determined by the DHS on-site representative.
- Six subsurface borings to 20 foot depths.(in areas of obvious contamination)
- Samples obtained at 1 foot, 5 foot, 10 foot, 15 foot, and 20 foot intervals.

Lot 37:

- Six subsurface borings to be continued to 20 foot depths.
- Three subsurface borings to a depth of 10 feet at edge of pond 1A.
- One subsurface boring in the most contaminated area of Pond 1A to be continued down to level of background contamination or groundwater, which ever is less.
- Samples obtained at 1 foot, 5 feet, 10 foot, 15 foot, and 20 foot intervals.

SAMPLE HANDLING

- No samples shall be composited in the field. Compositing shall occur only at the approval of DHS and shall occur in the laboratory. In the event that compositing is considered necessary, it shall be done in a manner to ensure that sufficient material from each sample is retained for individual analysis.
- Wall's consultant shall provide the appropriate number and size of containers to accommodate the sampling program and analysis (i.e., sufficient number to include field blanks, spikes, etc.) The Department shall provide its own sample containers.
- All samples will be split in the field so that DHS can conduct its own analyses. The samples shall be split in any of the following ways:

    Contents of the split spoon sampler shall be placed on a sheet of plastic and the contents mixed manually in order to produce a homogeneous sample. One half of the sample shall be placed in a DHS container, the other half placed in a Wall container. Due to the presence of volatile organics, this procedure must be completed quickly. The plastic sheet shall be replaced at the discretion of the DHS on-site representative.

    [illegible]

BOE-C6-0178093

of each spl[illegible], the bucket or tray should be [illegible]ased with acetone, hexane, or other cleaning agent to prevent cross contamination between samples.

SAMPLE SCREENING

- Field screening of samples shall be done using an HNU provided by WWI and operated by a technician experienced in using such equipment. Each sample shall be screened as they are split, and all readings shall be documented in the sample log.

QA/QC

- DHS has recieved the information requested from Brown & Caldwell concerning laboratory procedures and has determined that it is adequate for the needs of the Department.

- To ensure sample integrity, the split spoon sampler shall be rinsed with acetone (or similar cleaning agent) between samples.

- In addition, all auger equipment shall be steam cleaned between boreholes to prevent cross contamination. [illegible]his is a normal field procedure.

- All samples must be kept at a temperature of four degrees centigrade after containerization, and remain so until analyzed.

[illegible] SAFETY

- It is the responsibility of the [illegible] to [illegible]sure that the workers are properly prote[illegible]. The [illegible] recommend[illegible] and will [illegible] the following:

  Neoprene boots and [illegible]
  Hardhats
  Coveralls (Tyvek)
  Respirators equipped with [illegible] for organic vap[illegible]/dust.

[illegible]TAMINATION

- Equipment which comes [illegible] with waste [illegible] shall be decontaminated on-site [illegible] cleaning. Wash water [illegible] left on-site or disposed of at a [illegible].

Montrose Chemical Corporation of California

Torrance, California

RCRA PLANS AND PROCEDURES

November, 1980
Rev. 1 - May, 1981
Rev. 2 - April, 1982

CONTENTS

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EXHIBITS

A-1 California Hazardous Waste Manifest - Strong Acid Waste Sample Copy
A-2 California Hazardous Waste Manifest - Dilute Acid Waste Sample Copy
B California Hazardous Waste Manifest - Alkaline Waste Sample Copy
C Tank Data Sheet - 100,000-Gallon Recovered Sulfuric Acid Storage Tank
D Tank Data Sheet - E. 50,000-Gallon Recovered Sulfuric Acid Storage Tank
E Tank Data Sheet - W. 50,000-Gallon Recovered Sulfuric Acid Storage Tank
F Tank Data Sheet - 100,000-Gallon Alkaline Waste Storage Tank
G Tank Data Sheet - 50,000-Gallon Contaminated Alkaline Waste Storage Tank

General Statement

The Montrose-Torrance plant being a generator and storer of hazardous waste has filed EPA Form 1 General Information and the EPA Hazardous Waste Permit Application (Form 3 RCRA) as required under the EPA Permits Program (40 CFR Part 122). The following acknowledgment has been received from EPA:

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

RECEIVED
DEC 18 1980
MONTROSE-TOR...

EPA I.D. NUMBER ➤ CAD008242711

MONTROSE CHEMICAL CORP OF CAL
PO BOX 107
TORRANCE CA 90507

INSTALLATION ADDRESS ➤ 20201 SOUTH NORMANDIE AVENUE
TORRANCE CA 90507

EPA Form 8700-12A (4-80)

In order to comply with the RCRA program as a generator and storer of hazardous wastes the following procedures have been developed and activities implemented.

Manifest System

All shipments of hazardous wastes offsite must be accompanied by a California Hazardous Waste Manifest. When a load of hazardous waste is shipped, the white copy marked "Generator" in the lower right hand corner will be sent to the office. At the end of each month Xerox copies of each report will be sent to DOHS (California Department of Health Services) and the original white copy will be held until the yellow copy marked "To Generator" in lower right corner is received. Check the yellow copy to verify that both the transporter and TSD facility have filled it out certifying that the waste was disposed of properly. If everything is in order both copies are to be filed together and retained on file for a minimum of three years. If the yellow copy is incomplete or isn't received within 35 days after the date of shipment, Bernie Bratter, Nick Leonovich, or John Kallok must be so informed. The load will be traced to determine what happened. If the problem is not resolved by the end of 45 days an Exemption Report will be filed with EPA and the State Department of Health Services by one of the persons named above.

Sample copies of the manifests for our alkaline waste and sulfuric acid illustrating how they are to be completed are included below.

An annual summary of all offsite shipments of hazardous wastes will be compiled and filed with E.P.A. and the State Department of Health Services by March 1 for the preceding calendar year.

CALIFORNIA HAZARDOUS-WASTE MANIFEST

State Department of Health Services
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street, Sacramento, CA 95814

...ble for Ins... Type or print Clearly ... ress Hard

(1) Manifest Number 009-0083

GENERATOR (Generator Must Complete)

Name: MONTROSE CHEMICAL CORP. OF CALIF.
EPA NO.: CAD008242711
Address: 20201 S. Normandie — Phone No. 328-5469
City, State, Zip: Torrance, CA 90502

(3) Designated TSD Facility (Authorized to operate under an approved state program or federal program)
Name: BKK LANDFILL
EPA NO.: CAD067786749
Address: 2210 S. Azusa Avenue
City, State, Zip: W. Covina, CA 91792

(4) Alternate TSD Facility
Name: LIQUID WASTE DISPOSAL KETTLEMEN HILL SITE
EPA NO.: CAT000646117
Address: 4 mi. SW of Kettlemen City
City, State, Zip: CA 93239

U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS
SULFURIC ACID SPENT CORROSIVE MATERIAL	02 CORROSIVE	1832	2,800	gals.

CONTAINERS NUMBER: ______
TYPE: [ ] DRUMS [ ] BAGS [ ] CARTONS XX TANK TRUCK [ ] DUMP TRUCK [ ] OTHER

WASTE CATEGORY: Acid Solution — (7) EX. HAZ WASTE PERMIT NO. ______ — (8) GENERATING PROCESS: DDT Production

WASTE COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS
A. Sulfuric Acid	80	74	XX % [ ] ppm
B. DDT & Derivatives	50	15	[ ] % XX ppm
C. Chloro-Benzene Sulfonic Acid	6	2	XX % [ ] ppm
D. Balance Water			[ ] % [ ] ppm
E.			[ ] % [ ] ppm
F.			[ ] % [ ] ppm
G.			[ ] % [ ] ppm

Non Hazardous Material ______ %

WASTE PROPERTIES pH 0 — [ ] Toxic [ ] Flammable XX Corrosive/Irritant [ ] Reactive [ ] Sensitizer [ ] Carcinogen/Mutagen

PHYSICAL STATE [ ] Solid XX Liquid [ ] Sludge [ ] Slurry [ ] Gas [ ] Other ______

SPECIAL HANDLING INSTRUCTIONS: XX Gloves XX Goggles [ ] Respirator [ ] Other ______

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1 800 424 8802

(13) ______ Signature of Authorized Agent and Title ______ Date Shipped ______

ACID WASTE SAMPLES COPY

TRANSPORTER (HAULER MUST COMPLETE)
Name: CHANCELLOR & OGDEN, INC.
EPA NO.: CAD048498463
Address: 3031 East "I" Street — PHONE NO. (213) 432 8461
City, State, Zip: Wilmington, California 90744

(15) PICK-UP DATE ______ TIME ______ [ ] AM [ ] PM

(16) ______ Signature of Authorized Agent and Title ______ Date ______

TSD FACILITY (FACILITY OPERATOR MUST COMPLETE)

Name ______
EPA NO. ______
PHONE NO. ______

18 QUANTITY (If Measured) ______
19 STATE FEE (If Any) ______

(21) HANDLING OR DISPOSAL METHOD:
[ ] Surface Impoundment [ ] Landfill
[ ] Injection Well [ ] Land Treatment
[ ] Treatment (Specify) ______
[ ] Recovery or Reuse [ ] Storage/Transfer

INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT ______

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:
NAME ______
EPA NO. ______

(23) ______ Signature of Authorized Agent and Title ______ Date Accepted ______

3024

BOE-C6-0178099

REVISED 11-80

CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street, Sacramento, CA 95814

See reverse side for instructions.
Please type or print clearly. Press Hard.

(1) Manifest Number 009-106700

GENERATOR (Generator Must Complete)

(2) Name MONTROSE CHEMICAL CORP. OF CALIF.
EPA NO. CAD008242711
Address 20201 S. Normandie Phone No. 328-5469
City, State, Zip Torrance, CA 90502
Order Placed By ______ Order Date ______
Contract No. ______

(3) **DESIGNATED TSD FACILITY**
(AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM)
Name BKK LANDFILL
EPA NO. CAD067786749
Address 2210 S. Azusa Ave.
City, State, Zip W. Covina, California 91722
Phone No. (213) 965-0911

(4) **ALTERNATE TSD FACILITY**
Name LIQUID WASTE DISPOSAL KETTLEMAN HILLS SITE
EPA NO. CAT000646117
Address 4 Mi. SW of Kettleman City
City, State, Zip CA 93239
Phone No.

(5) U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS
WASTE SULFURIC ACID SPENT	02	1832	4,000	gals.
CORROSIVE MATERIAL	CORROSIVE			

CONTAINERS: NUMBER ______
TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS XX TANK TRUCK ☐ DUMP TRUCK ☐ OTHER

(6) WASTE CATEGORY Acid Solution (7) EX. HAZ. WASTE PERMIT NO. --- (8) GENERATING PROCESS DDT Production

LIST COMPONENTS:

	Component	Conc. Range Upper	Conc. Range Lower	Units
A.	Sulfuric Acid	36	22	XX % ☐ ppm.
B.	DDT & Derivatives	2,300	87.5	☐ % XX ppm.
C.	Chlorobenzene Sulfonic Acid	1.5	0.4	XX % ☐ ppm.
D.	NaMCBS	.75	0.075	XX % ☐ ppm.
E.				☐ % ☐ ppm.
F.				☐ % ☐ ppm.
G.				☐ % ☐ ppm.

Non Hazardous Material ______ %

(9) WASTE PROPERTIES: pH 1.0 ☐ Toxic ☐ Flammable XX Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

(10) PHYSICAL STATE: ☐ Solid XX Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other ______

(11) SPECIAL HANDLING INSTRUCTIONS: XX Gloves XX Goggles ☐ Respirator ☐ Other ______

(12) GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

(13) ______ Signature of Authorized Agent and Title ______ Date Shipped

TRANSPORTER (HAULER MUST COMPLETE)

(14) NAME CHANCELLOR & OGDEN
EPA NO. CAD048498463
ADDRESS 3031 East "I" Street PHONE NO. (213) 432-8461
CITY, STATE, ZIP Wilmington, California 90744

JOB NO. ______
UNIT NO. ______
(15) PICK-UP DATE ______
TIME ______ ☐ AM ☐ PM

ACID WASTE SAMPLE COPY

(16) ______ Signature of Authorized Agent and Title ______ Date

TSD FACILITY (FACILITY OPERATOR MUST COMPLETE)

(17) NAME BKK LANDFILL
EPA NO. CAD067786749
PHONE NO. (213) 965-0911

NAME ______
EPA NO. ______
PHONE NO. ______

(18) QUANTITY (If Measured) ______
(19) STATE FEE (If Any) $ ______
(21) HANDLING OR DISPOSAL METHOD:
☐ Surface Impoundment ☐ Landfill
☐ Injection Well ☐ Land Treatment
☐ Treatment (Specify) ______
☐ Recovery or Reuse ☐ Storage/Transfer

(20) INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT: ______

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

(22) NAME ______
EPA NO. ______

(23) ______ Signature of Authorized Agent and Title ______ Date Accepted

3025

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CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street
Sacramento, CA 95814

See reverse for Instructions
Please type or print clearly. Press Hard.

(1) Manifest Number 009-098354

GENERATOR (Generator Must Complete)

(2) Name MONTROSE CHEMICAL CORP. OF CALIF.
EPA NO. CAD008242711
Address 20201 S. Normandie Phone No. 328-5462
City, State, Zip Torrance, CA 90502

(3) Designated TSD Facility (Authorized to operate under an approved state program or federal program)
Name BKK LANDFILL
EPA NO. CAD067786749
Address 2210 S. Azusa Avenue
City, State, Zip W. Covina, CA 91792

(4) Alternate TSD Facility
Name LIQUID WASTE DISPOSAL KETTLEMEN HILL SITE
EPA NO. CAT000646117
Address 4 Mi. SW of Kettlemen City
City, State, Zip CA 93239

(5) U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS
WASTE CORROSIVE LIQUID NOS	02	1760	4,200	gal.
XXXXX CORROSIVE-SODIUM HYDROXIDE	CORROSIVE			

CONTAINERS NUMBER: ____
TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS XX TANK TRUCK ☐ DUMP TRUCK ☐ OTHER

(6) WASTE CATEGORY Alkaline Solution (7) EX. HAZ WASTE PERMIT NO. ____ (8) GENERATING PROCESS DDT Production

(9) LIST COMPONENTS:

	Component	Conc. Upper	Range Lower	Units
A	NaOH	2.5	0.3	XX % ☐ ppm.
B	Na2SO4	10	2	XX % ☐ ppm.
C	Na"CBS	1	0.1	XX % ☐ ppm.
D	DDT & Derivatives	3,000	100	☐ % XX ppm.
	Balance Water, %	86.5	97.6	
E.				☐ %
F.				☐ %
G.				☐ %

Non Hazardous Material ____ %

(10) WASTE PROPERTIES. pH 11.0 ☐ Toxic ☐ Flammable XX Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen ☐ Other ____

(11) PHYSICAL STATE: ☐ Solid XX Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other ____

(12) SPECIAL HANDLING INSTRUCTIONS: XX Gloves X Goggles ☐ Respirator ☐ Other ____

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

(13) ____ Signature of Authorized Agent and Title ____ Date Shipped

TRANSPORTER (HAULER MUST COMPLETE)

(14) NAME CHANCELLOR & OGDEN, INC.
EPA NO. CAD048498463
ADDRESS 3031 East "I" Street PHONE NO. (213) 432-8461
CITY, STATE, ZIP Wilmington, California 90744

(15) PICK-UP DATE ____
TIME ____ ☐ AM ☐ PM

(16) ____ Signature of Authorized Agent and Title ____ Date

TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

(17) NAME ____
EPA NO. ____
PHONE NO. ____

18 QUANTITY (If Measured) ____
19 STATE FEE (If Any) ____

(21) HANDLING OR DISPOSAL METHOD
☐ Surface Impoundment ☐ Landfill
☐ Injection Well ☐ Land Treatment
☐ Treatment (Specify) ____
☐ Recovery or Reuse ☐ Storage

ALKALINE WASTE

SAMPLE COPY

(20) INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT ____

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY

(22) NAME ____
EPA NO. ____

(23) ____ Signature of Authorized Agent and Title ____ Date Accepted

9205

BOE-C6-0178101

Waste Analysis Plan

In order to comply with RCRA regulations to store hazardous wastes the following Methods of Analysis for Hazardous Wastes will be followed by the control laboratory at the Montrose-Torrance plant. The analytical values obtained by the control laboratory will be recorded on the manifest accompanying each load of hazardous waste shipped offsite for disposal.

Methods of Analysis for Hazardous Wastes

I. Analytical Methods for Waste Acid:

A. Acidity, as H_2SO_4, by total titre . . . . . .report percent by wt.
Scott's Standard Methods of Chemical Analysis; (Vol. 6) Page 540ff

B. Chlorobenzene Sulfonic Acid, by hydrolysis . . .report percent by wt.
Montrose Standard Laboratory Procedures

C. Water Content, by K. Fischer . . . . report percent by wt.
Aquametry, Mitchell & Smith (1948) Page 245

D. DDT Isomers & Primary Analogs by GC (FID) . . . report ppm by wt.
Guide to Analysis of Pesticide Residue, U.S. Dept. H.E.W.
(Environmental Health Division)

Frequency: Daily for acidity and sulfonic acid residue; other tests periodically as required

II. Analytical Methods for Alkaline Waste:

A. Alkalinity, as NaOH, by total titre . . . . . .report percent by wt.
Scott's Standard Methods of Chemical Analysis; (Vol. 6) Page 600 ff

B. Chlorobenzene Sulfonate, by hydrolysis . . . . .report percent by wt.
Montrose Standard Laboratory Procedures

C. Water Content, by K. Fischer . . . .report percent by wt.
Aquametry, Mitchell & Smith (1948) Page 252

D. DDT Isomer & Primary Analogs, by GC (FID) . . .report ppm by wt.
Guide to Analysis of Pesticide Residues; U.S. Dept. of H.E.W.
(Environmental Health Division)

Frequency: Daily for alkalinity; other tests as required - report pH.

III. Other hazardous wastes that may be generated and stored prior to offsite disposal will be analyzed by the control laboratory and the values recorded on the manifest prior to shipment offsite. Standard recognized analytical procedures will be used by the control laboratory in evaluating the components of the waste material.

Sampling

1. The day shift acid recovery operator will draw a representative sample of the alkaline waste being shipped. If none is being shipped, a composite sample should be drawn from one or both of the waste liquid hold tanks. This sample is to be labeled as alkaline waste, dated and sent to the laboratory for analysis.

Analysis

1. The lab will determine the pH of the sample and record the results on the daily acid recovery analysis sheet.

2. The daily samples will be retained and composited each month for a complete analysis. The results will be recorded on the acid recovery analysis sheet and a copy made for Mr. Bratter. If the results are significantly different, Mr. Bratter will have the analysis shown on the manifest adjusted to correspond with the results obtained by the lab.

R/1

Inspection Plan

The hazardous wastes generated by the Montrose-Torrance plant are identified and listed in the Federal Register as Corrosive - E.P.A. Hazardous Waste Number D002.

The two types of wastes generated are stored in above-ground storage tanks and have been an integral part of the manufacturing process for many years. Therefore the storage tanks are and will continue to be under the control of the production department in regards to operation, inspection, maintenance and record-keeping.

The following general inspection information pertains to these storage tanks:

A. Recovered sulfuric acid storage tanks:

1. One 100,000 gallon flat bottom, mild steel vertical storage tank.
2. Two 50,000 gallon mild steel horizontal storage tanks.
3. Installed piping and pumps used in handling, storing and loading the sulfuric acid.

B. Alkaline waste storage tank:

1. One 100,000 gallon flat bottom mild steel vertical storage tank.
2. One 50,000 gallon flat bottom mild steel vertical storage tank.
3. Installed piping and pumps used in handling, storing and loading the alkaline liquid waste.

General inspection requirements:

It is the responsibility of the acid recovery plant operator to inspect the tanks, piping and pumps used in storing the sulfuric acid and alkaline wastes on a daily basis. He looks for leaks in the tank, pipelines and pumps. If any leaks or other problems are discovered he is instructed to report the problem to his supervisor. The supervisor, after checking into the problem, issues a work request to the maintenance department for corrective measures based on his findings. The maintenance department then takes whatever action is necessary to correct the problem.

Training

All new personnel will be trained in accordance with existing procedures and Job Analyses. All personnel will take part in an annual review and training session conducted by a member of management trained in the proper hazardous waste management procedures. The last training session was held on January 22, 1982.

Closure and Post-Closure Plans

The Montrose-Torrance Plant, in compliance with RCRA requirements, has formulated the following Closure and Post-Closure Plans:

Although there are no plans to close the plant in the immediate future, it is estimated that within 90 days after a decision to close the facility is announced the following plans will be put into effect:

1. Description of Storage Tanks

   There are two hazardous waste streams that are collected and stored in five above-ground steel tanks described on the following tank data sheets:

Date: May 7, 1981

Plant Montrose-Torrance

Tank Tag No: ---

Tank Name 100,000-gallon Recovered Sulfuric Acid Storage Tank

Capacity: 100,000-gallons

Material of Construction Mild Steel

Maximum usually stored: 80,000-gallons

Above grade	XX	Open	
Below grade		Covered.	XX
Diked		Vented	XX

Condition of Tank:

Good - was installed new.

Nature of contents:

Recovered Sulfuric Acid of 75% titre, containing an average of 5% MCBS with traces of tar and MCB plus 15-50 ppm of DDT and derivatives.

How is tank unloaded:

Piping, gear pump and loading rack are installed and in operation. Also, by vacuum truck from bottom nozzle.

CERTIFICATION

I certify that the 100,000-gallon storage tank described above is properly designed and constructed for the storage of 75% sulfuric acid.

Engineer Guy A. Dimichele

Signature Guy A. Dimichele

Certificate No. CH 1630 State CA

Date 5/7/82

R/2

Date: May 7, 1981

Plant Montrose-Torrance

Tank Tag No: ____________

Tank Name E. 50,000-gallon Recovered Sulfuric Acid Storage Tank

Capacity: 50,000-gallons

Material of Construction Mild Steel

Maximum usually stored: 45,000-gallons

Above grade	[XX]	Open	[ ]
Below grade	[ ]	Covered	[XX]
Diked	[ ]	Vented	[XX]

Condition of Tank:

Good - used tank.

Nature of contents:

Recovered sulfuric acid of 75% titre, containing an average of 5% MCBS with traces of tar and MCB plus 15-50 ppm of DDT and derivatives.

How is tank unloaded:

Piping, pump and loading rack are installed and in operation. Also, by vacuum truck from bottom nozzle.

CERTIFICATION

I certify that the 50,000-gallon storage tank described above is properly designed and constructed for the storage of 75% sulfuric acid.

Engineer Guy A. Dimichele

Signature Guy A. Dimichele

Certificate No. CH 1630 State CA

Date 5/7/82

R/2

Date: May 7, 1981

Plant Montrose-Torrance

Tank Tag No: ______

Tank Name W. 50,000-gallon Recovered Sulfuric Acid Storage Tank

Capacity: 50,000-gallons Material of Construction Mild Steel

Maximum usually stored: 45,000-gallons

Above grade [XX]

Below grade [ ]

Diked [ ]

Open [ ]

Covered [XX]

Vented [XX]

Condition of Tank:

Good - used tank.

Nature of contents:

Recovered sulfuric acid of 75% titre, containing an average of 5% MCBS with traces of tar and MCB plus 15-50 ppm of DDT and derivatives.

How is tank unloaded:

Piping, pump and loading rack are installed and in operation.
Also, by vacuum truck from bottom nozzle.

CERTIFICATION

I certify that the 50,000-gallon storage tank described above is properly designed and constructed for the storage of 75% sulfuric acid.

Engineer Guy A. Dimichele

Signature Guy A. Dimichele

Certificate No. CH 1630 State CA

Date 5/7/82

R/2

BOE-C6-0178108

Date: May 7, 1981

Plant: Montrose-Torrance

Tank Tag No:

Tank Name: 100,000-gallon Alkaline Waste Storage Tank

Capacity: 100,000-gallons

Material of Construction: Mild Steel

Maximum usually stored: 50,000-gallons

Above grade	[XX]	Open	[ ]
Below grade	[ ]	Covered	[XX]
Diked	[ ]	Vented	[XX]

Condition of Tank:

Good - used tank.

Nature of contents:

Alkaline waste water containing 0.3-2.5% NaOH, 2-10% Na_2SO_4, 0.1-1% NaMCBS and 100-3,000 ppm DDT and derivatives.

How is tank unloaded:

By vacuum truck from bottom nozzle.

CERTIFICATION

I certify that the 100,000-gallon storage tank described above is properly designed and constructed for the storage of alkaline waste.

Engineer: Guy A. Dimichele

Signature: Guy A. Dimichele

Certificate No. CH 1630 State CA

Date 5/7/82

R/2

Date: May 7, 1981

Plant: Montrose-Torrance

Tank Tag No: ____________

Tank Name: 50,000-gallon Contaminated Alkaline Waste Storage Tank

Capacity: 50,000-gallons

Material of Construction: Mild Steel

Maximum usually stored: 25,000-gallons

Above grade	XX	Open	
Below grade		Covered	XX
Diked		Vented	XX

Condition of Tank:

Good - used tank.

Nature of contents:

Alkaline waste water of about 11 pH, containing Na_2SO_4, Na_2SO_3, NaMCBS, $CaSO_3$, $CaSO_4$, $Ca(OH)_2$, tar and trace of free MCB.

How is tank unloaded:

By vacuum truck from bottom nozzle.

CERTIFICATION

I certify that the 50,000-gallon storage tank described above is properly designed and constructed for the storage of alkaline waste.

Engineer: Guy A. Dimichele

Signature: Guy A. Dimichele

Certificate No. CH 1630 State CA

Date 5/7/82

R/2

2. Closure Procedure - Acid Tanks

As soon as possible after closure, the acid contents will be transferred to tank trucks by a Stauffer-approved contractor and disposed of at a Class I disposal site - BKK Landfill, West Covina, California.

After the tanks have been emptied, they will be neutralized with waste alkaline water from the 50M or 100M alkaline waste storage tanks, then washed with industrial recirculating water. Washing will be consolidated with waste liquid in tank trucks for contractor disposal at the above listed Class I disposal site.

The washed tanks will then be sold as surplus used tanks or cut up and sold as scrap iron. The tanks rest on concrete foundations that will be cleaned and decontaminated as needed.

A professional engineer will certify completion of the closure.

3. Closure Procedure - Alkaline Waste Tanks

As soon as possible after closure the alkaline waste contents will be transferred to tank trucks by a Stauffer-approved contractor and disposed of at a Class I disposal site - BKK Landfill, West Covina, California.

If any solids remain in these tanks, they will be washed with industrial recirculating water until neutral. Washing will be augmented with air sparging. The remaining solids will be removed either manually or by skip-loader, depending upon the amount. All washings and solids will be disposed of by contractor at the above listed Class I disposal site.

The empty tanks will then be steamed out with live steam until completely decontaminated. After cooling, they will be sold as surplus used tanks or cut up and sold as scrap iron. The tanks rest on concrete foundations that will be cleaned and decontaminated as required.

A professional engineer will certify completion of the closure.

4. Closure Cost - Acid Tanks

Assume: 130,000 gallons of waste acid on hand to be disposed of at the BKK Landfill:

BKK Costs: (assume 3 to 1 dilution of the acid)

$\frac{130{,}000 \text{ gals.} \times 3}{4{,}200/\text{load}} \times \$1{,}000/\text{load} =$ $93,000

a. Tank Clean-Outs (3)

2 operators @ 10 shifts each @ $170/shift 7,000

$100,000

R/2

b. Demolition of Decontaminated Tanks (3)

100M Tank - 2 men @ 10 days = $175 x 10 =	$1,750
E 50M Tank - 2 men @ 5 days = $175 x 5 =	875
W 50M Tank - 2 men @ 5 days = $175 x 5 =	875
	$3,500

c. Clean-Up Costs

Approximately	$1,250
	$4,750

It is estimated that the surplus or scrap value of the tanks will offset the cost of demolition or removal of the tanks and the clean up costs for the foundations.

Therefore, the closure cost for the acid storage tanks using 1982 cost data would be:

$100,000

5. Closure Costs - Alkaline Waste Tanks

Assume: 75,000 gallons of alkaline waste on hand
Assume: All of the 75,000 gallons to BKK Landfill

a. BKK Costs:

75,000 gals. / 4,200 gals./load x $700/load = $12,500

b. Tank Clean-Outs (2)

2 operators @ 5 shifts @ $200/shift = $2,000

c. Skip Loader for Contaminated Alkaline Waste Tank

(Spent lime and tar accumulation) = $2,000

d. BKK Charges for Eight Bins of Solid Waste = $6,000

Total $22,500

e. Demolition of Decontaminated Tanks (2)

100M Tank - 2 men @ 10 days = $200 x 10 =	$2,000
50M Tank - 2 men @ 5 days = $200 x 5 =	1,000
	$3,000

f. Clean-Up Costs

Approximately	$750
	$3,750

R/2

It is estimated that the surplus or scrap value of the tanks will offset the cost of demolition or removal of the tanks and the clean up costs for the foundations.

Therefore, the closure costs for the alkaline storage tanks using 1982 cost data would be:

$22,500

The total costs for closure of the entire hazardous waste storage facility would then be as shown:

Waste Acid Storage Tanks		$100,000
Waste Alkaline Storage Tanks		22,500
	Total	$122,500

It is estimated that it would take approximately 90 days to complete the work described for closure of the facility.

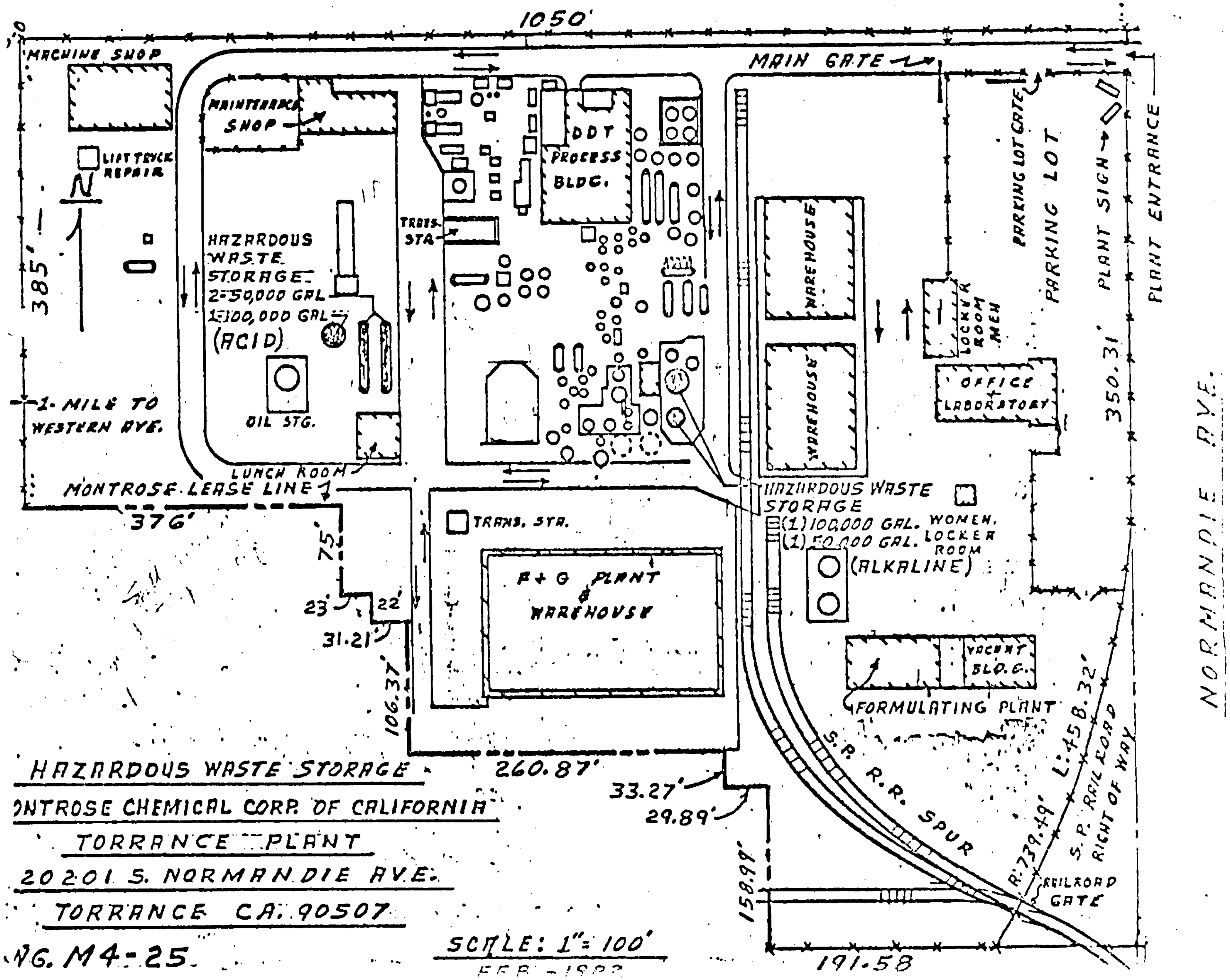
Contingency Plans and Emergency Procedures

The Montrose-Torrance plant has developed and has available the following contingency plans covering employee safety and actions to be taken in the event of fire, explosion or other emergency occurrence:

Title	Date
Safety Manual	May 1982
Environmental Compliance Operating Plan	April 1982
Hazardous Substance Spill Control and Counter-Measure Plan	April 1982
Oil Spill Prevention Control and Counter-Measure Plan	April 1982
Emergency Action and Fire Prevention Plan	September 1981
Respiratory Protection Manual	February 1982

3040

BOE-C6-0178115



HAZARDOUS WASTE STORAGE
MONTROSE CHEMICAL CORP. OF CALIFORNIA
TORRANCE PLANT
20201 S. NORMANDIE AVE.
TORRANCE CA. 90507

DWG. M4-25

SCALE: 1" = 100'
FEB - 1982

TSG 14-1(81)95

LA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 2 . . . '81

SUBJECT: RCRA Interim Status Standards Investigation of Montrose Chemical Corporation, Torrance, California

FROM: Steve Simanonok, Environmental Protection Specialist
Kenneth Yelsey, Environmental Scientist

TO: Bob Mandel, Chief, Hazardous Materials Section

I. Background

On December 22, 1980, Kenneth Yelsey and Steve Simanonok of the Surveillance and Analysis Division conducted an inspection of Montrose Chemical Corporation at 20201 S. Normandie Avenue in Torrance, California. This inspection was requested by the Water Branch of Enforcement Division to determine the facility's compliance with RCRA Interim Status Standards.

II. Investigation

The inspectors presented their credentials and were received by John Kallok, Plant Manager and Bernard Bratter, Production Superintendent. The inspectors began with an office interview and followed with an inspection of the property. Montrose Chemical Corporation is jointly owned by Stauffer Chemical Company and Chris Craft Corporation. Additionally, Montrose Chemical leases the property from Stauffer Chemical.

Montrose Chemical indicated on their notification form that their hazardous waste activity included both generation and treatment/storage/disposal. Montrose produces technical grade DDT, having discontinued their monochlorobenzene and chloral production. The wastes generated by this process include spent corrosive and alkaline solutions. Some off-specification DDT is disposed of at the BKK landfill. Mr. Kallok stated that sludges are produced from almost all processes, but removal only occurs approximately once every 10 years. Mr. Bratter and Mr. Kallok stated that the sulfuric acid is stored in 1-100,000 and 2-50,000 gallon tanks, while the alkaline waste is stored in another 50,000 gallon tank. They also stated that a series of underground collection tanks, each with a 20,000 gallon capacity, are emptied every day by pumping into the 50,000 gallon storage tanks. The liquid wastes are hauled away by tanks trucks. Montrose has disconnected their sewer line to eliminate all possiblity of discharge. All runoff is gathered in an open concrete pit and is recycled.

EPA FORM 1320-6 REV. 3-76

BOE-C6-0178116

GENERATOR STANDARDS

Montrose Chemical Corporation utilizes the California Hazardous Waste Manifest. The inspectors reviewed completed manifests and found them to contain all the required information. No manifest exceptions were noted. Sample manifests are included in Appendix A.

All current wastes at the Montrose facility are contained in bulk storage tanks as previously discussed. Since no drums were present for inspection, the inspectors reviewed the Montrose Safety Manual Sections on packaging, labeling, marking, and placarding. The inspectors found these sections to be adequate. The index to this Safety Manual is contained in Appendix C.

INTERIM STANDARDS FOR TSD FACILITIES

General Facility Standards

Montrose Chemical performs waste analyses on-site in their "Control Lab". The methods of analysis are contained on page 3 of Appendix A. Site security is maintained by a chain link fence. The facility operates 24 hours/day with controlled access to the property. The general inspection plan is contained on page 5 of Appendix A.

Preparedness and Prevention/Contingency Plan and Emergency Procedures

Various plans have been developed by Montrose Chemical to respond to emergency situations. These plans are listed on page 6 of Appendix A. The inspectors reviewed these plans and found that they thoroughly addressed all of the requirements. The index to the Disaster Plan is Appendix B. The index to the Safety Manual is Appendix C.

Manifest System, Recordkeeping, and Reporting

The facility provided the inspectors with copies of their August 5, 1980 and November 11, 1980 notifications to EPA. These are included as Appendices D and E, respectively.

Since Montrose does not receive hazardous waste from off-site, all manifest requirements have been discussed under the Generator Standards Section of this inspection report.

III. Suspected Violations

None.

Appendices:

A. RCRA Plans and Procedures
B. Disaster Plan (index)
C. Safety Manual (index)
D. August 5, 1980 Notification to EPA
E. November 11, 1980 Consolidated Permits Application
F. EPA Inspector Checklist
G. Photographs

76-004

MRI REPORT

EPA-440/9-76-009

WASTEWATER TREATMENT TECHNOLOGY DOCUMENTATION FOR DDT MANUFACTURE

FINAL REPORT
February 6, 1976

Contract No. 68-01-3524
MRI Project No. 4127-C

EPA Project Officer
Mr. Ralph H. Holtje

For

Office of Water [illegible] and Standards
U.S. Environmental Protection Agency
Waterside Mall, [illegible] 2834
Mail Stop [illegible]
401 M Street, S.W.
Washington, D.C. [illegible]

PREFACE

This is one of four reports on pesticide-containing wastewater prepared by Midwest Research Institute for the Office of Water Planning and Standards. These reports concern the wastewater treatment technology involved in the manufacture of aldrin/dieldrin, endrin, toxaphene, and DDT. This report is concerned with DDT.

These reports were prepared by Dr. Alfred F. Meiners, Mr. Charles E. Mumma, Mr. Thomas L. Ferguson, and Mr. Gary L. Kelso. This program (MRI Project No. 4127-C) has been under the general supervision of Dr. Edward W. Lawless, Head, Technology Assessment Section. Dr. Frank C. Fowler, President, Research Engineers, Inc., and Mr. William L. Bell, President, Arlington Blending and Packaging, acted as consultants to the program.

Approved for:

MIDWEST RESEARCH INSTITUTE

L. J. Shannon

L. J. Shannon, Assistant Director
Physical Sciences Division

February 6, 1976

INTRODUCTION

Midwest Research Institute has performed a comprehensive examination of the wastewater treatment technology applicable to aldrin/dieldrin, endrin, DDT, and toxaphene. The work was performed for the Environmental Protection Agency under Contract No. 68-01-3524.

The basic objectives of the program were: (a) to perform an examination of the wastewater management practices currently employed in the manufacture of the specified pesticides; (b) to examine the state of the art of potential wastewater treatment processes that might be applicable to this industry; and (c) to select those processes that would be applicable to EPA control technology requirements for toxic pollutants. The cost of existing and proposed wastewater treatment methods was of special interest.

This report concerns the wastewater treatment technology for DDT manufacture.

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SECTION I

SUMMARY

The Montrose Chemical Corporation is currently the sole manufacturer of DDT in the United States and produces DDT only at its plant at Torrance, California. The estimated production of DDT at this plant for 1975 is about 60 million pounds. The 1975 sales price for DDT (as technical grade) was about 50¢/lb. The production capacity of this plant is about 85 million pounds of DDT per year.

In the production process, monochlorobenzene and chloral are condensed in the presence of concentrated sulfuric acid. Sulfuric acid is recovered and reused. DDT is recovered by crystallization. The manufacturing process is essentially continuous and the plant operates on a three shift per day basis for 360 days/year.

The current manufacture of DDT at the Montrose plant results in the production of alkaline wastewater (30,000 gal/day, containing 119 lb/day, or about 423 ppm of DDT + DDD + DDE) and acid wastewater (10,000 gal/day). At present, these wastewaters are hauled off-site by truck and are disposed of in an approved Class 1 California dump. Sufficient land is available for at least another 25 years of this type of dumping operation. Another waste stream from the production facility consists of wastewaters from the engine room and from sanitary waste (a total of 5,000 gal/day containing 0 to 5 ppb or 0 to 0.0002 lb/day of DDT + DDD + DDE); this waste is discharged to a sewer leading to a municipal sewerage system. Other wastewater flow is contained within the Montrose plant by a closed-loop processing system, and use of a sealed-bottom holding-recycling pond. Within recent years, Montrose has substantially reduced the volume of their wastewater.

Montrose is currently interested in alternatives to the presently used dumping operation and is investigating potential methods for treatment and disposal of the alkaline wastewater. Montrose is also considering incineration of its acid wastewater as a possible alternate to the current disposal practice.

This report examines in detail four alkaline wastewater treatment systems that have promise of effectively reducing the concentration of DDT and related compounds (DDD + DDE) and the daily load. These systems are: (a) a solvent extraction/Friedel-Crafts method; (b) a two-stage solvent extraction system; (c) activated carbon adsorption; and (d) synthetic resin adsorption.

A summary of estimated costs for these selected alkaline wastewater treatment systems is shown in Table 1 for the current flow rate of 30,000 gal/day (20.8 gpm). Assumptions made in preparing these estimates are detailed in the report. The concentration of DDT in the treated effluent is also estimated.

The 1974 cost for hauling and dumping all segregated alkaline wastewater from the Montrose plant was about 0.48¢/lb of product DDT or \$26.40/1,000 gal. The cost for hauling and dumping the acid wastewater in 1974 was about 0.33¢/lb of product DDT or \$55.56/1,000 gal.

Solvent Extraction/Friedel-Crafts

This method has been developed and tested through the pilot plant stage. The estimated capital investment for this system is \$381,000 and the estimated operating cost is 0.89¢/lb of product DDT or \$49.17/1,000 gal. of effluent. This system has the potential of producing an effluent containing about 590 ppb (1.4 lb/day) of DDT and related compounds (DDD + DDE) including about 36 ppb of DDT, 116 ppb of DDD and 438 ppb of DDE.

For this system, costs are also given in Table 1 for a system which treats 45,000 gal/day of wastewater, which is the estimated effluent rate corresponding to operation of the DDT plant at full production capacity. The estimated capital investment for this production rate is \$485,000 and the estimated operating cost is 0.86¢/lb of product DDT or \$45.09/1,000 gal. of effluent.

This system has not been fully developed and some potential scale-up problems have been noted. The estimated time to complete the engineering design, construct the treatment plant and put this system on-stream is 3 to 4 years.

Two-Stage Solvent Extraction System

The wastewater treatment system which appears to have the most promise from both a technical and economic standpoint is a two-stage extraction

Table 1. SUMMARY OF ESTIMATED COSTS (1975) FOR DDT WASTEWATER TREATMENT AND DISPOSAL SYSTEMS
(Concerning Wastewater at Montrose Chemical Corporation Plant, Torrance, California)

System	Status of system	Alkaline wastewater flow rate: gpm	Alkaline wastewater flow rate: gpd	Estimated DDT[c] in wastewater: ppb	Estimated DDT[c] in wastewater: lb/day	Capital investment cost ($)	Annual operating cost ($)	Cost cents per pound of DDT produced	Cost per 1,000 gal. of effluent ($)
Hauling and dumping in Class I landfill[a]	Currently used	20.8[b]	30,000[b]	~423,000	~119	Unknown	285,500	0.48	26.40
Solvent extraction/ Friedel-Crafts	Developed in pilot plant	20.8[b] 31.2	30,000[b] 45,000	~ 590 ~ 590	~ 1.4 ~ 1.4	381,000[f] 485,000[f]	531,000[f] 730,000[f]	0.89[f] 0.86[f]	49.17[f] 45.09[f]
Two-stage extraction with monochlorobenzene	Conceptual for grant application, partially developed	20.8[b]	30,000[b]	~ 32[d]	~ 0.008	101,000[b]	82,800	0.14	7.66
Activated carbon bed adsorption	Conceptual system	20.8[b]	30,000[b]	< 25[e]	< 0.006[e]	230,000[g]	35,000[g]	0.06[g]	3.33[g]
Synthetic resin (XAD-4) adsorption	Conceptual system	20.8[b]	30,000[b]	< 25[e]	< 0.006[e]	209,000[g]	72,000[g]	0.12[g]	6.85[g]

a/ Data for operations in 1974--provided by Montrose Chemical Corporation, Torrance, California (Ferguson and Meiners, 1975).
b/ These values apply for alkaline wastewater currently being handled at the Montrose Chemical Corporation plant in Torrance, California. In addition, 10,000 gpd of acid wastewater, which is not amenable to treatment by solvent extraction or the other potential treatment systems listed, is currently disposed of in an off-site Class I dump.
c/ Includes DDT plus DDD and DDE, except where otherwise noted.
d/ Including 1 ppb of DDT or DDD and 30 ppb of p,p'-DDE.
e/ Represents DDT only; does not account for DDD and DDE which are present.
f/ Study estimates based on unpublished cost data developed from pilot plant tests (Sweeny, 1973).
g/ Order-of-magnitude cost estimates based on meager data.

system which uses monochlorobenzene as a solvent. This system would return all of the recovered pesticide to the DDT process and would result in an effluent which would contain very low concentrations of DDT and DDD (1 ppb of DDT or DDD plus 30 ppb of p,p'-DDE).

Some operating steps for this system have been partially developed in laboratory and pilot stages; under an EPA-supported grant project (approved in January 1976), Montrose and its subcontractors will conduct an intensive investigation to develop and evaluate this potential process.

For the two-stage solvent extraction system, the estimated capital investment is $101,000 and the estimated treatment cost is 0.14¢/lb of product DDT or $7.66/1,000 gal. of effluent. This system has a potential capability to produce an effluent containing about 32 ppb (0.008 lb/day) of DDT and related compounds including 1 ppb of DDT, 1 ppb of DDD, and 30 ppb of p,p'-DDE.

The estimated time required to complete the development of this system and to design and construct a full-scale treatment plant is 3 to 4 years.

Activated Carbon Adsorption

Laboratory isotherm data have been determined for the adsorption of DDT on activated carbon and at least one pilot-scale test has been conducted. Also, laboratory studies have indicated the technical feasibility of this potential treatment system.

The activated carbon adsorption system would have a capital investment cost of about $230,000 and the estimated unit operating costs would be

0.06¢/lb of product DDT or $3.33/1,000 gal. of effluent. This system would have the potential for producing an effluent containing less than 25 ppb (0.006 lb/day) of DDT only; no evaluation could be made regarding the DDD and DDE content of the treated wastewater.

The estimated time required to develop and implement this process for plant operation is 3 to 3.5 years.

Synthetic Resin Adsorption

The resin adsorption system would use a patented synthetic polymeric adsorbent which can be regenerated with recovery of the pesticide. No technical or cost data were found in the published literature concerning the application of this process to DDT wastewater.

The synthetic resin adsorption system would require a capital investment of about $209,000 and the estimated operating cost would be 0.12¢/lb of product DDT or $6.85/1,000 gal. of effluent. This system would be potentially capable of reducing the DDT content in the treated wastewater to less than 25 ppb; no evaluation could be made regarding the DDD and DDE content of the treated wastewater.

The estimated time required for development of this system and the design and construction of a full-scale treatment plant is 3 to 4 years.

SECTION II

CHARACTERIZATION OF THE INDUSTRY

The background and general characteristics of the DDT manufacturing industry are discussed below. The manufacturing process is described and the in-plant controls and wastewater characteristics are discussed.

BACKGROUND AND GENERAL CHARACTERISTICS

DDT (dichloro-diphenyl-trichloroethane), for many years one of the most widely used pesticidal chemicals in the United States, was first synthesized in 1874. Its effectiveness as an insecticide, however, was only discovered in 1939. Shortly thereafter, during and after World War II, the U.S. began producing large quantities of DDT for control of vector-borne diseases such as typhus and malaria abroad, and for agriculture, home and garden, and public health purposes domestically. By the early 1950's, 13 companies were involved in the manufacturing of DDT and exports had become substantial (EPA, 1975).

Domestic production reached a maximum of about 188 million pounds in 1963. By the late 1960's DDT output had declined by about one-third, e.g., 123 million pounds in 1969. Production then declined precipitously, to an estimated 60 million pounds per year in the early 1970's (EPA, 1975).

Among the last firms to cease producing DDT were: Geigy Corporation (1966), Allied Chemical (1969), Olin Corporation (1969), Diamond Shamrock Corporation (1970), and Lebanon Chemicals (1971)(EPA, 1975).

Domestic use peaked at about 79 million pounds in 1959, but declined to about 18 million pounds in 1971 and was 22 million pounds in 1972. More recent estimates of use are not available (EPA, 1975), but are presumably very small because of cancellation actions (see below).

Export lagged behind domestic consumption up to 1958, and the maximum did not occur until 1963. From 1958 onward, the quantity of DDT exported continued to exceed domestic consumption (EPA, 1975).

In January 1971, under a court order (EPA, 1975) following a suit by the Environmental Defense Fund (EDF), EPA issued notices of intent to cancel all remaining federal registrations of products containing DDT. The principal crops affected by this action were cotton, citrus, and certain vegetables (EPA, 1975).

In March 1971, EPA issued cancellation notices for all registrations of products containing the DDT-like insecticide, DDD (also called TDE). DDD (2,2-bis(p-chlorophenyl)-1,1-dichloroethane) was well known to be a DDT metabolite. In August 1971, upon the request of 31 DDT formulators, a hearing began on the cancellation of all remaining federally registered uses of products containing DDT. On June 14, 1972, the EPA administrator announced the final cancellation of all remaining crop uses of DDT in the U.S. effective December 31, 1972. The order did not affect public health and quarantine uses, or exports of DDT. The administrator based his decision on findings of persistence, transport, biomagnification, toxicological effects and on the absence of benefits of DDT in relation to the availability of effective and less environmentally harmful substitutes. The effective date of the prohibition was delayed for 6 months in order to permit an orderly transition to substitute pesticides (EPA, 1975).

Immediately following the DDT prohibition by EPA, the pesticides i - dustry and EDF filed appeals contesting the June order with several U.S. courts. Industry filed suit to nullify the EPA ruling while EDF sought to extend the prohibition to those few uses not covered by the order. The appeals were consolidated in the U.S. Court of Appeals for the District of Columbia, On December 13, 1973, the court ruled that there was "substantial evidence" in the record to support the EPA administrator's ban on DDT and its metabolites (EPA, 1975).

DDT MANUFACTURE

DDT is currently (1975) manufactured at only one plant in the United States, the Montrose Chemical Corporation facility at Torrance, California. The plant also prepares DDT formulations. The current production capacity is about 85 million pounds of DDT per year (Ferguson and Meiners, 1975). The current (1975) production rate for DDT at this plant is reported to be about two-thirds of capacity (Sobelman, 1975a), and the present sales price for DDT (as technical grade) is about 50¢/lb (Sobelman, 1975a). The rate of production for 1976 and 1977 is expected to be within ± 10 to 15% of the current rate (Ferguson and Meiners, 1975). The rate of production is essentially constant during the year. Montrose produces technical grade DDT for sale to WHO, AID, and directly to foreign nations in the Northern and Southern Hemispheres.

DDT (dichloro-diphenyl-trichloroethane) is a name that covers a few isomers, the most active of which is 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane. Its manufacture is relatively simple: it is made by condensing monochlorobenzene and chloral in the presence of concentrated sulfuric acid (Lawless et al., 1972).

Production Chemistry

$$C_2H_5OH + Cl_2 \longrightarrow CCl_3CHO$$

$$C_6H_6 + Cl_2 \longrightarrow C_6H_5Cl$$

$$CCl_3CHO + C_6H_5Cl \xrightarrow[\text{2. NaOH}]{\text{1. } H_2SO_4} CCl_3CH(C_6H_4Cl)_2 + H_2O$$

75-80%, p,p'-isomer
15-20%, o,p'-isomer
plus related compounds
including DDD and DDE*

The biggest problems in DDT manufacture are in the recovery of unreacted ingredients and in steering the reaction toward production of the desired isomer. The reaction is kept below 30°C and takes place at atmospheric pressure in a stirred batch reactor system (Lawless et al., 1972).

DDT recovery, according to a Diamond Alkali Company patent (Miller, 1960) is by crystallization. Impure DDT is washed with a caustic solution. The washed DDT is then dried and crystallized into solid material (Ferguson and Meiners, 1974).

* DDD is 2,2-bis(p-chlorophenyl)-1,1-dichloroethane; DDE is dichloro-diphenyl-dichloroethylene.

A detailed description of DDT manufacturing has been given by Porter (1962) of the Diamond Alkali Company. A production and waste schematic for DDT is presented in Figure 1.

The manufacturing process is continuous except for batch input to the first stage of the reactor. The plant operates on a three shift per day, 7 days a week basis, except for routine maintenance and lost time caused by breakdowns in operating equipment. The on-stream time each calendar year is reported to be 360 days (Ferguson and Meiners, 1975).

The age of the plant equipment ranges from 28 years old to brand new (Ferguson and Meiners, 1975).

Data for the Montrose DDT operations at Torrance, California, for production equipment, raw-materials, by-products and other process wastes and losses are listed below (Ferguson and Meiners, 1974 and 1975).

Production Equipment

Process continuity: semibatch   Est. annual production: 60 MM lb/year (1975)

Equipment dedication: DDT only   Plant capacity: 85 MM lb/year

Equipment age: Not available   Formulation on site: Yes

Raw Materials

Material	Received from	Received by	Storage
1. Chloral	Henderson, Nevada	Tank cars	Steel storage tanks on plant site
2. C_6H_5Cl	Henderson, Nevada	Tank cars	Steel storage tanks on plant site
3. Oleum	Compton or Dominques, California	Tank trucks	Steel storage tanks on plant site
4. Caustic	Henderson, Nevada	Tank trucks	Steel storage tanks on plant site

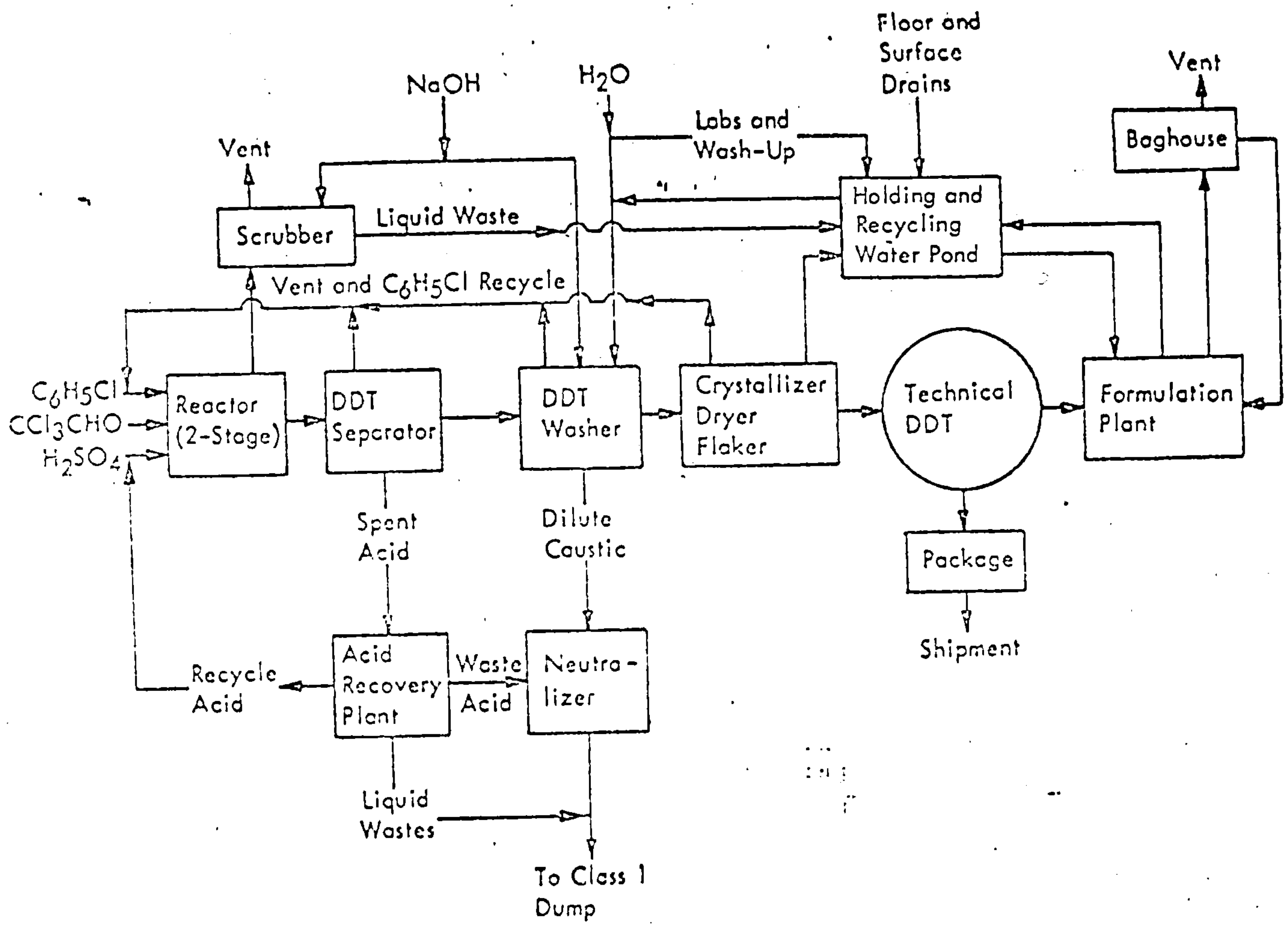

Figure 1 - Production and waste schematic for DDT (Montrose Chemical Company)

Reaction By-Products

Material	Form	Amount produced (lb/lb AI)	Disposition
1. None			

Other Process Wastes and Losses

Material	Form	Amount produced (lb/lb AI)	Disposition
1. Active ingredient	Aqueous	Unknown	Class 1 dump
2. Solvents			
3. Na_2SO_4	Aqueous	0.87 10-15 cu yard/day	Holding pond, recycle Class 1 dump

Disposition of Technical and Formulated Products

Warehouse on site	Shipments: Technical product: Container	Transportation	Formulated products: Formulation	Container	Transportation
X	50-lb bags	Boxcar	WP (75% AI)	100-200 lb lined fiber drums and 75-lb boxes	Truck for export via Los Angeles; boxcar for other destinations

Hoods are located at points having emissions potential and exhaust under vacuum to a baghouse. No scrubbers are used. Liquid formulations are no longer being made (Ferguson and Meiners, 1974).

Quality control: Montrose maintains its own quality control laboratory for routine analyses. Setting point is the major quality control used. To date they have had no off-specification material that could not be reworked (Ferguson and Meiners, 1974).

Personnel safety: No unusal safety or hazard problems are associated with DDT production. Standard personnel safety equipment is used (Ferguson and Meiners, 1974).

WASTEWATER CHARACTERISTICS

This portion of the report presents a general description of wastewater produced in the manufacture of DDT plus a specific description of the wastewater generated by the Montrose Chemical Corporation.

General Wastewater Characteristics

According to Atkins (1972) the wastes resulting from the DDT manufacturing process include spent acids (hydrochloric and sulfuric), sodium monochlorobenzene sulfonate, chloral, NaOH caustic wastewaters, monochlorobenzene, and sulphonic acid derivatives. The waste streams may contain DDT in the 1 to 5 mg/liter range with DDE and other related compounds present in amounts up to four times the DDT level. The pH of the waste is low and the salt content is high.

The volume of spent acid ranges from 440 to 550 gal/ton of DDT made. This liquid contains 55% acid and 5% other organic substances and water. The first washwater, about 800 gal/ton of DDT made, contains from 2 to 6% spent acid. The second washwater, also about 800 gal/ton of DDT made, contains a very small proportion of spent acid neutralized with sodium carbonate. In addition, about 90 gal/ton issue from centrifuges which contain a smaller proportion of the neutralized acid (Grindley, 1950).

Wastewaters also result from the absorption of the mixed gases from the manufacture of chloral alcoholate. The gases are first water washed, producing a 10% by weight solution of hydrochloric acid (2,700 to 2,900 gal/ton of DDT). The gases are then washed with a caustic soda solution, producting a solution (220 to 440 gal/ton of DDT) containing sodium hypochlorite equivalent to 2.0% chlorine, sodium chlorate equivalent to 0.2 to 0.5% chlorine, some sodium chloride and excess sodium hydroxide (Grindley, 1950).

Wastewater Characteristics - Montrose Chemical Corporation

The process portion of the DDT plant has no liquid waste outfall (Ferguson and Meiners, 1975). Wastewater flow is contained within the plant by a closed-loop processing system, and use of a sealed bottom holding-recycling pond, except for about 30,000 gal/day of alkaline wastewater and about 10,000 gal/day of acid waste, which are currently removed by truck and placed in a California-approved Class 1 dump (Sobelman, 1975b).

There is some decomposition of DDT in the process reactor, and HCl and SO_2 are present in the vent gas. The vent from the reactor is scrubbed with caustic and water. Liquid from off-gas vent scrubbers and surface drainage from the DDT plant area is collected in a holding pond and recycled to the process. This pond serves as the surge capacity for the cooling water system (Ferguson and Meiners, 1975). Sobelman (1975a) has reported that there is essentially no evaporation of water from this pond.

The holding pond (approximately 75 ft x 50 ft x 15 ft deep) has been used for about 20 years, but was lined with concrete about 5 years ago to overcome the necessity of installing test wells to monitor possible leaching (Ferguson and Meiners, 1975). Montrose indicates that this recycle system has been satisfactory and that no significant changes would be made if it had to be constructed today (Ferguson and Meiners, 1975).

At present, the segregated alkaline wastewater from the Montrose DDT plant averages about 30,000 gal/day, but it is estimated that the discharge rate could range up to about 45,000 gal/day if the plant were operated at the maximum DDT capacity of about 85 million pounds per year (Sobelman, 1975b).

Currently, there is one combined source of about 5,000 gpd of wastewater which is being discharged into the sewer of the Torrance, California, plant for DDT production. The breakdown and analysis of this waste stream for DDT and metabolites (DDD and DDE) is as follows:

Source	Gal/day	DDT + DDD + DDE (ppm)	Lb of DDT/day
Engine room	2,500	0-0.005	0-0.0001
Sanitary waste	2,500	0-0.005	0-0.0001
	5,000	0-0.005	0-0.0002

Sources of the principal waste, alkaline wastewater, are neutralized caustic liquor from the DDT-washing operation, tar pot drainings, spills and tank drainings. In 1975, this effluent discharge rate was 30,000 gpd and all of this wastewater was disposed of in a Type 1 landfill. A typical analysis for 1975 of the alkaline wastewater is shown in Table 2.

Table 2. TYPICAL COMPOSITION OF UNTREATED ALKALINE WASTEWATER[a] (Montrose DDT Plant, Torrance, California)

Component	lb/day	Concentration (ppm)[b]
Sodium sulfate	21,615	76,883
Sodium salt of monochlorobenzenesulfonic acid	3,670	13,054
Caustic	50	177.8
DDT (+ DDE, DDD)	119	423.3
Miscellaneous (tars, etc.)	139	494.4
Water	255,550	
	281,143	

a/ Average flow rate, 30,000 gpd.
b/ Values were calculated from the lb/day data.
Source: Montrose Grant Application (1975).

The discharge rate and characteristics of this waste are fairly constant and do not show seasonal fluctuations. The DDT plant is on stream at this level of two shifts per week and 12 months/year, except for breakdown and routine maintenance.

In-Plant Control - Montrose Chemical Corporation

All drains and process sewers at the Montrose plant have been isolated from the city sewer system. Only sanitary waste and boiler blowdown water go to the city sewers. The restroom lavatory basins, however, discharge to the holding pond system. Water consumption has been reduced from about 20 million gallons to about 2 million gallons per month. Water from the holding pond is also used for cooling water without filtration. This practice has caused no problem to date. The "recycle" water typically contains 10 to 15 ppm DDT (Lawless et al., 1972).

Some 10 to 15 cu yards/day of solid waste, bags, empty containers, etc., are also taken by a commercial disposal service to a Class 1 dump, which is approved for wastes of this type in California. Incineration is not approved.

Equipment washdown is not a problem as this is normally done only during shutdowns. Washwater goes to the recycle pond. Spills and leakers have not been a major problem. One spill occurred when a truck carrying technical material had an accident and spilled DDT. The material was picked up along with the top 3 in. of soil and disposed of (Lawless et al., 1972).

According to the company, DDT losses to the sewer were < 1 lb/day for at least 2 years before modification of the waste treatment facilities and never more than 10 to 15 lb/day since the 1940's. The amounts of DDT entering and leaving various Los Angeles city and county sewers from all sources are uncertain (Dreyfuss, 1971 and Schmidt et al., 1971), but DDT is apparently adsorbed strongly on sewage sediments: the county sanita-tion district removed 0.5 million pounds of sediments said to contain 4,500 lb of DDT (Air/Water Pollution Report, July 1971). This sediment apparently went also to a Class 1 dump.

GEORGE DEUKMEJIAN, *Governor*

BT,

This facility is adjacent to Montrose.

Pls check w/ SEU if they're doing something with facility; & if appropriate, refer this ltr to them.

Thanx.

7/9/86

Referred to Megan Robinson, SEU.

1985, discussion with
, the spray disposal of
)1 W. Del Amo Boulevard in

igation and found that up to
es are disposed of by
tion of concrete lined storm
controlled, wastewater was
drain. Although
are periodically removed and
sidual wastes was found in
ked off section.

cal wastes is illegal and
ace water.

e disposal of chemical
ed soil in the disposal
ed disposal site.

You are also directed to submit a written report to this Board by September 27, 1985, describing a plan and a time schedule to comply with the above directives. Your plan is to include a waste characterization study and a sampling and analysis program which would delineate the horizontal and vertical extent of wastes in the soil. Samples are to be analyzed for metals and organic compounds.

GEORGE DEUKMEJIAN, Governor

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012-4596
(213) 620-4460

September 13, 1985

Mr. Charles Evan, Manager
Jones Chemical Company
P.O. Box 275
Torrance, CA 90507

SPRAY DISPOSAL OF CHEMICAL WASTES
(File No. BVIa-62)

This letter is a follow-up to your August 16, 1985, discussion with Regional Board staff member Eddie Ip concerning the spray disposal of chemical wastes on your facility located at 1401 W. Del Amo Boulevard in Los Angeles.

On August 16, 1985, Mr. Ip conducted an investigation and found that up to 3,000 gallons per day of treated chemical wastes are disposed of by spraying the wastewater onto a blocked off section of concrete lined storm drain. Since the discharge is not adequately controlled, wastewater was also ponded on the ground adjacent to the storm drain. Although accumulated residual wastes in the storm drain are periodically removed and disposed of offsite, evidence of stains and residual wastes was found in the storm drain channel downstream of the blocked off section.

The present method of disposal for these chemical wastes is illegal and threatens to pollute both groundwater and surface water.

You are directed to immediately cease the onsite disposal of chemical wastes, remove any liquid wastes and contaminated soil in the disposal area, and dispose of these wastes at an approved disposal site.

You are also directed to submit a written report to this Board by September 27, 1985, describing a plan and a time schedule to comply with the above directives. Your plan is to include a waste characterization study and a sampling and analysis program which would delineate the horizontal and vertical extent of wastes in the soil. Samples are to be analyzed for metals and organic compounds.

If you have any questions, please call Eddie Ip at (213) 620-5405 or Nelson Wong at (213) 620-5681.

Nelson Wong

NELSON WONG
Senior Water Resource
Control Engineer

EI:NW:mp

cc: MaryEtta Marks, State Water Resources Control Board, Office of Chief Counsel
Department of Health Services, Toxic Substances Control Division
City of Los Angeles, Industrial Wastes Department
Carl Sjoberg, Los Angeles County, Department of Public Works
Los Angeles County Flood Control District

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: P. O. Box 4998 Whittier, California 90607
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

WALTER E. GARRISON
Chief Engineer and General Manager

Montrose Chemical Corp.
P.O. Box 147
Torrance, Ca. 90507

May 15, 1980

File:05-00.05-00/80-1487

Subject: Required Critical Parameter Report Under
Industrial Wastewater Discharge Permit No. 1487

Dear Mr. Kallok:

Your Industrial Wastewater Discharge Permit was approved in the Districts' letter dated June 5, 1974. One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permit.

Your latest Critical Parameter Report was received on May 15, 1980. The Districts have reviewed this report and found that it is delinquent in the following areas:

[ ] The analyses submitted by your company indicate that it is in violation of the Sanitation Districts' Phase I effluent limits, copy attached. Corrective actions must be taken to reduce the discharge of the parameters underlined in red on the attached copy of your report. A detailed description, and plans if necessary, of the required corrective actions must be submitted to the Sanitation Districts. Any proposed significant pretreatment system modifications must be approved by the Sanitation Districts prior to construction. Compliance with this requirement is necessary to ensure continued use of the public sewerage system for industrial wastewater discharge.

[XX] The parameters underlined in red must also be reported as required on the Frequency of Laboratory Analysis Form issued with your Permit.

[ ] You are not in compliance with the Districts requirements for the submittal of Critical Parameter Reports. [illegible] days of this letter and continuing on the required frequency thereafter.

3074

☐ The Critical Parameter Report must be signed by a representative of your company.

☐ Other:

The above items must be completed and returned to the Sanitation Districts within 30 days of the date of this letter. If you have any questions regarding these requirements, please call the Districts' Industrial Waste Section at (213) 699-7411 or (213) 685-5217, extension #261.

Very truly yours,

Walter E. Garrison

By Leon S. Directo
Leon S. Directo
Supervising Civil Engineer

WEG:LSD:wh

Encls. •

NOTE: You are reminded that the critical parameters are to be determined and the report forms submitted to the Districts according to the following schedule:

1. Annual Analysis -- July 1
2. Semi-Annual Analysis -- January 1, July 1
3. Quarterly Analysis -- January 1, April 1, July 1, October 1

Montrose Chemical Corporation of California
P.O. Box 147
20201 South Normandie Avenue • Torrance, California 90507 • (213) 775 2565 • 328 5462

May 12, 1980

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of
Los Angeles County
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for April, 1980 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:wt

Enclosure

cc: Mr. Samuel Rotrosen w/enclosure
Mr. Max Sobelman w/enclosure
Mr. Guy A. Dimichele w/enclosure

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1117

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2,500	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		830	mg/l	Y	Nickel - Total			mg/l
E	pH		12.6	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.012	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		1.18	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<0.002	mg/l
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)		<0.012	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
S	Copper - Total			mg/l	MM	Temperature		90	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

NON CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)				
PP	Calcium			mg/l	A1				
QQ	Magnesium			mg/l	A2				
RR	Potassium			mg/l	A3				
SS	Barium			mg/l	A4				
TT	Nitrate			mg/l	A5				
UU	Chloride			mg/l	A6				
VV	Bromide			mg/l	A7				
WW	Sulfate			mg/l	A8				
XX	Phosphorus Ortho			mg/l	A9				

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analysis write A in this column. Analysis values must be determined using representative 24 hour composite samples by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

(Print) Bio-Technics Laboratory, Inc., 1133 Crenshaw Bl., L.A., CA 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. of California — 2879
Name of Company Having Wastewater Discharge — I.C. Number(s)

(Print) 20201 S. Normandie Ave., Torrance, CA 90502
Address of Wastewater Discharge

(Print) 20201 S. Normandie Ave., Torrance, CA 90502
Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date May 12, 1980 Location Torrance California 90502

Plant Manager
Position (Administrative Officer of Company with Wastewater Discharge)

Signed Name John L. Kallok

5-5-80

CERTIFICATION OF ANALYSIS

Montrose Chemical Corporation
20201 So. Normandie Avenue
Torrance, California 90507

Attn: B. Bratter, DDT Plant Superintendent

Test Report No. 1-2-27300
Date Received: 4-02-80
Date Initiated: 4-07-80
Date Completed: 4-18-80
P.O. No. 186-0082

Sample Description: One (1) bottle of Water labeled as Sewer Sample, Batch No. 04-02-80.

Type of Examination: CHEMICAL ASSAY

Reference: According to methods recommended in The Standard Methods for the Examination of Water and Wastewater, 13th Edition (1971).

Sample Preparation: The sample was prepared according to procedure.

Results:

Analyte	BT Proced. No.	Results
pH	5-1-026-77	12.6
Suspended Solids	5-1-031-77	830 mg/l
Cyanide	5-1-121-79	< 0.012 mg/l
Zinc	5-1-063-75	1.18 mg/l
Chlorinated Hydro-carbons	5-4-010-73	< 0.002 ppm
Pesticides (Chlorinated)	5-4-002-77	< 0.012 ppm

Examination by: Peng Sim Khoo
Peng Sim Khoo, B.S., Chemist

Approved by: [illegible signature] 5-6-80
William P. Van Arsdale?verp, M.A.,
Chairman, Chemistry Department

ms

Montrose Chemical Corporation of California

P.O. Box 147
20201 South Normandie Avenue • Torrance, California 90507 • (213) 775-2565 • 328-5462

March 3, 1980

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of
Los Angeles County
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for January 1980 covering analysis of our sewer effluent. I regret the delay in reporting, although the samples were taken January 3, 1980, I did not receive the analyses from Bio Technics Laboratory until today.

Yours very truly,

Guy A. Dimichele

Guy A. Dimichele
Supt. of Maint. & Engr.

GAD:wt

Enclosure: Critical Parameter Report Form

cc: Samuel Rotrosen w/enclosure
Max Sobelman w/enclosure
John L. Kaliok w/enclosure

#1487

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		3744	mg/l	Y	Nickel - Total			mg/l
E	pH		12.75	Units	Z	Selenium - Total		0.62	mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		.07	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total			mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)			
P	Cadmium - Total			mg/l				8.9	mg/l
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)			mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)		< .005	pCi/l
S	Copper - Total			mg/l	MM	Temperature		90°C	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

Ident Code	NON CRITICAL PARAMETERS (Report When Available)				Ident Code	OTHER PARAMETERS (Report When Requested)			
PP	Calcium			mg/l	A1				
QQ	Magnesium			mg/l	A2				
RR	Potassium			mg/l	A3				
SS	Barium			mg/l	A4				
TT	Nitrate			mg/l	A5				
UU	Chloride			mg/l	A6				
VV	Bromide			mg/l	A7				
WW	Sulfate			mg/l	A8				
XX	Phosphorus Ortho			mg/l	A9				

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined using representative 24 hour composite samples by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

BIO-TECHNICS LABORATORY, INC., 1133 Crenshaw Blvd., Los Angeles, CA 90019
(Print) Name and Address of Laboratory Performing Analyses or Flow Measurements

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA — 2879
(Print) Name of Company Having Wastewater Discharge — SIC Number(s)

20201 So. Normandie AV, Torrance, CA 90502
(Print) Address of Wastewater Discharge

(Print) Additional Location Data (Use above if there is only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data constitute a true and correct representation of the wastewater discharged from the stated discharge point.

Date March 3, 1980 Location Torrance California 90502

Greg A. Dimichele — Superintendent of Engineering & Maintenance
Title Name — Position of Authorized Official of Company with Wastewater Discharge

3-5-80 M.L.F.

3067

BOE-C6-0178154

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address / P. O. Box 4998, Whittier, California 90607
Telephone (213) 699-7411 / From Los Angeles (213) 685-5217

WALTER E. GARRISON
Chief Engineer and General Manager

Montrose Chemical Corp.
P.O. Box 147
Torrance, Ca. 90507

February 8, 1980

File: 05-00.05-00/80-1487

Subject: Required Critical Parameter Report Under
Industrial Wastewater Discharge Permit No.

Dear Mr. Kallok:

Your Industrial Wastewater Discharge Permit was approved in the Districts' letter dated June 5, 1974. One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permit.

Your latest Critical Parameter Report was received on November 13, 1979. The Districts have reviewed this report and found that it is delinquent in the following areas:

[ ] The analyses submitted by your company indicate that it is in violation of the Sanitation Districts' Phase I effluent limits, copy attached. Corrective actions must be taken to reduce the discharge of the parameters underlined in red on the attached copy of your report. A detailed description, and plans if necessary, of the required corrective actions must be submitted to the Sanitation Districts. Any proposed significant pretreatment system modifications must be approved by the Sanitation Districts prior to construction. Compliance with this requirement is necessary to ensure continued use of the public sewerage system for industrial wastewater discharge.

[ ] The parameters underlined in red must also be reported as required on the Frequency of Laboratory Analysis Form issued with your Permit.

[X] You are not in compliance with the Districts requirements for the submittal of Critical Parameter Reports. Please submit a Critical Parameter Report on the items specified in your permit approval within [illegible] days of this letter and according to the required frequency thereafter.

/_/ The Critical Parameter Report [illegible] be signed by a representative of your company

/_/ Other:

The above items must be completed and returned to the Sanitation Districts within 30 days of the date of this letter. If you have any questions regarding these requirements, please call the Districts' Industrial Waste Section at (213) 699-7411 or (213) 685-5217, extension 2261.

Very truly yours,

Walter E. Garrison

By
Leon S. Directo
Supervising Civil Engineer

WEG:LSD:wh

Encls.

NOTE: You are reminded that the critical parameters are to be determined and the report forms submitted to the Districts according to the following schedule:

1. Annual Analysis -- July 1
2. Semi-Annual Analysis -- January 1, July 1
3. Quarterly Analysis -- January 1, April 1, July 1, October 1

GENERAL MINERAL ANALYSIS*

BROWN AND CALDWELL

CONSULTING ENGINEERS
ANALYTICAL SERVICES DIVISION
373 SOUTH FAIR OAKS AVE.
PASADENA, CA 91105
PHONE (213) 795-7553

Log No. P83-06-143

Date Sampled: Not Given
Date Received: 06-22-83
Date Reported: 07-12-83

Page 1 of 3

RECEIVED
JUL 15 1983
TORRANCE WATER DEPT.

Reported To:
Torrance Municipal Water District
3031 Torrance Boulevard
Torrance, California 90503
Attention: John Bargwat

cc.

Laboratory Director

Sample Description: Well #4

Anions	Miligrams per liter	Milliequiv. per liter	Determination	Milligrams per liter	Determination	Milligrams per liter
Nitrate Nitrogen (as NO_3)	2.9	0.05	Hydroxide Alkalinity (as $CaCO_3$)	0.0	Temperature, °C	24
Chloride	99	2.79	Carbonate Alkalinity (as $CaCO_3$)	0.0		
Sulfate (as SO_4)	1.6	0.03	Bicarbonate Alkalinity (as $CaCO_3$)	250		
bonate (as HCO_3)	300	4.94	Calcium Hardness (as $CaCO_3$)	110		
Carbonate (as CO_3)	0.0	0.0	Magnesium Hardness (as $CaCO_3$)	66		
Total Milliequivalents per Liter		7.81	Total Hardness (as $CaCO_3$)	176		
Cations	**Milligrams per liter**	**Milliequiv. per liter**	Iron	< 0.080		
Sodium	92	4.00	Manganese	< 0.047		
Potassium	5.0	0.13	Copper	< 0.067		
Calcium	45	2.24	Zinc	< 0.016		
Magnesium	16	1.32	Foaming Agents (MBAS)	< 0.1		
Total Milliequivalents per Liter		7.69	Dissolved Residue, Evaporated @ 180°C	450		
			Specific Conductance, micromhos @ 25°C	690	pH	7.7

*Conforms to Title 22, California Administrative Code (California Domestic Water Quality and Monitoring Regulations)

BOE-C6-0178157

BROWN AND CALDWELL
CONSULTING ENGINEERS
ANALYTICAL SERVICES DIVISION
373 SOUTH FAIR OAKS AVE
PASADENA, CA 91105
PHONE (213) 795-7553

GENERAL MINERAL ANALYSIS*

Log No. P83-06-143

Date Sampled Not Given
Date Received 06-22-83
Date Reported 07-12-83

Page 2 of 3

RECEIVED
JUL 15 1983
TORRANCE WATER DEPT.

Reported To: Torrance Municipal Water District

cc.

Edward Wilson
Laboratory Director

Sample Description Well #5

Anions	Miligrams per liter	Milliequiv. per liter	Determination	Milligrams per liter	Determination	Milligrams per liter
Nitrate Nitrogen (as NO_3)	2.6	0.04	Hydroxide Alkalinity (as $CaCO_3$)	0.0	Temperature, °C	23
Chloride	103	2.90	Carbonate Alkalinity (as $CaCO_3$)	0.0		
Sulfate (as SO_4)	1.0	0.02	Bicarbonate Alkalinity (as $CaCO_3$)	240		
Bicarbonate (as HCO_3)	293	4.80	Calcium Hardness (as $CaCO_3$)	130		
Carbonate (as CO_3)	0.0	0.0	Magnesium Hardness (as $CaCO_3$)	70		
Total Milliequivalents per Liter		7.76	Total Hardness (as $CaCO_3$)	200		
Cations	**Milligrams per liter**	**Milliequiv. per liter**	Iron	< 0.080		
Sodium	84	3.65	Manganese	< 0.047		
Potassium	5.0	0.13	Copper	< 0.067		
Calcium	51	2.57	Zinc	< 0.016		
Magnesium	17	1.40	Foaming Agents (MBAS)	< 0.1		
Total Milliequivalents per Liter		7.75	Dissolved Residue, Evaporated @ 180°C	430		
			Specific Conductance, micromhos @ 25°C	720	pH	7.[illegible]

*Conforms to Title 22, California Administrative Code (California Domestic Water Quality and Monitoring Regulations)

BOE-C6-0178158

BROWN AND CALDWELL
CONSULTING ENGINEERS
ANALYTICAL SERVICES DIVISION
373 SOUTH FAIR OAKS AVE
PASADENA, CA 91105
PHONE (213) 795-7553

GENERAL MINERAL ANALYSIS*

Log No. P83-06-143

Date Sampled Not Given
Date Received 06-22-83
Date Reported 07-12-83

Page 3 of 3

RECEIVED
JUL 15 1983

Laboratory Director

Reported To: Torrance Municipal Water District

cc.

Sample Description Well #6

Anions	Miligrams per liter	Milliequiv. per liter	Determination	Milligrams per liter	Determination	Milligrams per liter
Nitrate Nitrogen (as NO_3)	12	0.19	Hydroxide Alkalinity (as $CaCO_3$)	0.0	Temperature, °C	21
Chloride	73	2.07	Carbonate Alkalinity (as $CaCO_3$)	0.0		
Sulfate (as SO_4)	7.6	0.16	Bicarbonate Alkalinity (as $CaCO_3$)	200		
Bicarbonate (as HCO_3)	250	4.04	Calcium Hardness (as $CaCO_3$)	130		
Carbonate (as CO_3)	0.0	0.0	Magnesium Hardness (as $CaCO_3$)	62		
Total Milliequivalents per Liter		6.46	Total Hardness (as $CaCO_3$)	192		
Cations	**Milligrams per liter**	**Milliequiv. per liter**	Iron	< 0.080		
Sodium	55	2.39	Manganese	< 0.047		
Potassium	2.6	0.07	Copper	< 0.067		
Calcium	52	2.60	Zinc	< 0.016		
Magnesium	15	1.23	Foaming Agents (MBAS)	< 0.1		
Total Milliequivalents per Liter		6.29	Dissolved Residue, Evaporated @ 180°C	320		
			Specific Conductance, micromhos @ 25°C	590	pH	8.0

*Conforms to Title 22, California Administrative Code (California Domestic Water Quality and Monitoring Regulations)

BOE-C6-0178159

Montrose Chemical Corporation of California

P.O Box 147

20201 South Normandie Avenue • Torrance, California 90507 • (213) 775-2565 • 328 5462

#1/9

November 7, 1979

Mr. Jay G. Kremmer
Head, Industrial Wast Section
County Sanitation Districts of
Los Angeles County
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmor:

Please find enclosed our "Critical Parameter Report" for October, 1979 covering analysis of our sewer effluent.

Yours very truly,

Guy A. Dimichele

Guy A. Dimichele
Supt. of Engr. and Maintenance

GAD:wt

Enclosure: Critical Parameter Report Form

cc: Samuel Rotrosen w/enclosure
Max Sobelman w/enclosure
John L. Kallok w/enclosure

3085

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		3500	gals/day	V	Manganese Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury Total			mg/l
C	COD			mg/l	X	Molybdenum Total			mg/l
D	SS (Suspended Solids)		408	mg/l	Y	Nickel Total			mg/l
E	pH		7.2	Units	Z	Selenium Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium Total			mg/l
H	Sulfide			mg/l	CC	Thallium Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin Total			mg/l
J	Fluoride			mg/l	EE	Titanium Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc Total		0.24	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<0.002	mg/l
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)		<0.002	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
S	Copper - Total			mg/l	MM	Temperature		90	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)			
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. *Estimated values are acceptable for new plants only.*

BIO-TECHNICS LABORATORY INC. 1133 Crenshaw Bl., Los Angeles, CA 90019
(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

Montrose Chemical Corporation of California 2879
(Print) Name of Company Having Wastewater Discharge — I/C Number(s)

20201 S. Normandie Ave., Torrance, California 90502
(Print) Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data constitute a true and correct representation of the wastewater discharged from the stated discharge point.

Date 11/7/79 Location Torrance California 90502

Gary A. Dimichele
Gary A. Dimichele — Supt. of Engr. and Maint.
Position (Administrative Officer of Company with Wastewater Discharge)

BOE-C6-0178161

Montrose Chemical Corporation of California

P.O. Box 147
20201 South Normandie Avenue • Torrance, California 90507 • (213) 775-2565 • 328-5462

August 6, 1979

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los
Angeles County
P. O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for July, 1979 covering analysis of our sewer effluent.

Yours very truly,

John L. Kallok

John L. Kallok
Plant Manager

JLK:cw

Enclosure: Critical Parameter Report Form

cc: Samuel Rotrosen w/enclosure
Max Sobelman w/enclosure
Guy Dimichele w/enclosure

SANITATION DISTRICTS OF LOS ANGELES COUNTY 9/11/? #1487
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		994	mg/l	Y	Nickel - Total			mg/l
E	pH		12.5	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total			mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)		0.50	mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<0.002	mg/l
P	Cadmium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)		<0.002	mg/l
Q	Chromium - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
R	Cobalt - Total			mg/l	MM	Temperature		90°F	Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate (S)			mg/l
U	Lead - Total			mg/l					

NON CRITICAL PARAMETERS (Report When Available) / **OTHER PARAMETERS** (Report When Requested)

Ident Code	Parameter				Ident Code	Parameter		
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

(Print) BIO-TECHNICS LABORATORY INC. 1133 Crenshaw Blvd., Los Angeles, CA 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corporation of California 2879
Name of Company Having Wastewater Discharge — SIC Number(s)

(Print) 20201 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date 9/6/71 Location Torrance, California

John L. Kellet [signature] Plant Manager
Signed Name — Position (Administrative Officer of Company with Wastewater Discharge)

BOE-C6-0178163

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

July 1, 1978

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for June, 1978, covering analysis of our sewer effluent.

Yours very truly,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

SANITATION DISTRICTS OF [illegible] COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

[illegible] 1551

[illegible] 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
[illegible]		2700	[illegible]	V	[illegible] - Total			mg/l
[illegible]		50	[illegible]	W	[illegible] - Total			mg/l
[illegible]			mg/l	X	[illegible] - Total			mg/l
[illegible] Suspended Solids		1160	mg/l	Y	Nickel - Total			mg/l
[illegible]		11.9	Units	Z	[illegible] - Total			mg/l
[illegible] Dissolved Solids			mg/l	AA	Silver - Total			mg/l
[illegible] (N)			mg/l	[illegible]	Sodium - Total			mg/l
[illegible]			mg/l	CC	[illegible] - Total			mg/l
[illegible]		<0.01	mg/l	DD	Tin - Total			mg/l
[illegible]			mg/l	EE	Titanium - Total			mg/l
[illegible] - Total			mg/l	[illegible]	Zinc - Total		0.4	mg/l
[illegible] - Total			mg/l	GG	[illegible] Grease (Hexane Extract)			mg/l
[illegible] - Total			mg/l	HH	Phenols			mg/l
[illegible] - Total			mg/l		Surfactants (MBAS)			mg/l
[illegible] - Total			mg/l	[illegible]	Chlorinated Hydrocarbons (except pesticides)		<0.002	mg/l
[illegible] - Total			mg/l					
Chromium - Total			mg/l	[illegible]	Pesticides (Chlor. Hydrocarb.)		<0.002	mg/l
Cobalt - Total			mg/l	[illegible]	Radioactivity (Alpha, Beta & Gamma)			pCi/l
Copper - Total			mg/l	[illegible]	Temperature		90°F	Degrees °F
[illegible] - Total			mg/l	[illegible]	Color			Units
[illegible] - Total			mg/l	[illegible]	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS (Report When Available)				OTHER PARAMETERS (Report When Requested)	
Calcium		mg/l	A1		
Magnesium		mg/l	A2		
Potassium		mg/l	A3		
[illegible]		mg/l	A4		
[illegible]		mg/l	A5		
[illegible]		mg/l	A6		
[illegible]		mg/l	A7		
[illegible]		mg/l	A8		
[illegible] Solids		mg/l	A9		

1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters [illegible] by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by [illegible] Analysis values must be determined [illegible] 24 hour comp[illegible] Districts Approved Laboratory. If values are [illegible] estimate, write E in this column. Estimated values are acceptable for new plants only.

[illegible]O-TECHNICS LABORATORY INC. [illegible]33 Crenshaw Blvd., Los Angeles 90029
(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

Montrose Chemical Corp. 2879
(Print) Name of Company Having Wastewater Discharge — SIC Number(s)

20201 S. Normandie Ave., Torrance, California 90502
(Print) Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data constitutes a true and correct representation of the wastewater discharged from the stated discharge point.

Date 7/3/72 Location Torrance, California

[signature] Plant Manager
Signature Name — Position (Administrative Officer of Company with Wastewater Discharge)

BOE-C6-0178165

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 137
TORRANCE, CALIFORNIA 90507

April 28, 1978

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for April, 1978, covering analysis of our sewer effluent.

Yours very truly,

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1487

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gal/day	V	Manganese - Total			mg/l
B	Flow (Peak)			gal/min	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		1110	mg/l	Y	Nickel - Total			mg/l
E	pH		8.6	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		0.73	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons		<0.02	mg/l
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides		<0.02	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
S	Copper - Total			mg/l	MM	Temperature		90°C	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)			
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples by a State certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

90019

BIO-TECHNICS LABORATORY INC 1133 Crenshaw Blvd, Los Angeles
(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

Montrose Chemical Corp. 2879
(Print) Name of Company Having Wastewater Discharge SIC Number(s)

20201 S. Normandie Ave., Torrance, California 90502
(Print) Address of Wastewater Discharge

(Print) Additional Location Data (State discharge point connection to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data constitute a true and correct representation of the wastewater discharged from the stated discharge point.

Date ________ Location Torranco California ________

Signed [signature] Plant Manager (Authorized Official of Company with Wastewater Discharge)

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1487

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		3560	mg/l	Y	Nickel - Total			mg/l
E	pH			Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		0.15	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (exclude pesticides)		<0.0002	mg/l
P	Cadmium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)		<0.0002	mg/l
Q	Chromium - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
R	Cobalt - Total			mg/l	MM	Temperature		90°	Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate (S)			mg/l
U	Lead - Total			mg/l					

NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)		
PP	Calcium			mg/l	A1		
QQ	Magnesium			mg/l	A2		
RR	Potassium			mg/l	A3		
SS	Barium			mg/l	A4		
TT	Nitrate			mg/l	A5		
UU	Chloride			mg/l	A6		
VV	Bromide			mg/l	A7		
WW	Sulfate			mg/l	A8		
XX	Phosphorus Ortho			mg/l	A9		

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined using representative 24 hour composite samples by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

(Print) BIO-TECHNICS LABORATORY INC. 1133 Crenshaw Blvd., Los Angeles 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. 2879
Name of Company Having Wastewater Discharge I/C Number(s)

(Print) 2020 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print)
Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date 3/6/78 Location Torrance , California

3-7-78 H/Milne

John L. Kelble Plant Manager
Signed Name Position (Administrative Officer of Company with Wastewater Discharge)

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

LOS ANGELES, CALIFORNIA 90005

February 7, 1978

PLEASE REPLY TO
P.O. BOX 147
TORRANCE, CA 90507

Mr. Jay G. Kremer
Head Industrial Waste Section
County Sanitation Districts of
Los Angeles County
1955 Workman Mill Road
Whittier, California

Re: File No. 05-00.05-00/78-1487

Dear Mr. Kremer:

It was brought to our attention that our Critical Parameter report dated January 9, 1978 was incomplete because the analysis of total Zinc was omitted from the report. In checking, it was found that the Bio-Technics Laboratory, who normally analyze and report the critical parameters of our waste water inadevertently neglected to run a total Zinc on this sample before discarding it. Since this was an honest error, we ask to be excused from reporting the value of this parameter because we have no means of rectifying this error.

We notice that we have been submitting Critical Parameter Reports on a quarterly basis for three and one-half years and the total flow and source of our waste water discharge has not changed significantly during this period. Therefore, we wonder if it is still necessary to continue to submit reports on a quarterly basis and to report the parameter values on total Cyanide and total Zinc considering that our sewered waste water will continue to consist of sanitary wastes, boiler blowdown water and the water used to regenerate our water softeners? All other waste water including our process waste liquor is collected and is hauled away to a Class I sanitary landfill. Therefore, if possible we appeal to the District to change the frequency of reporting from quarterly to annually and to eliminate the requirements of reporting total Cyanide, total

Ren

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Zinc and any other parameters that are no longer critical or relevant in meeting the requirements of our Industrial Waste Water Discharge Permit.

Thank you for your consideration in this matter.

Yours very truly,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

[illegible] Workman Mill Road / Whittier, California
Mailing Address: P. O. Box 4998, Whittier, California 90607
Telephone: [illegible] / From Los Angeles (213) [illegible] 5217

JOHN D. PARKHURST
Chief Engineer and General Manager

January 25, 1978

Montrose Chemical Corp. of California
P. O. Box 147
Torrance, CA 90507

File: 05-00.05-00/78-1487

Attention: John L. Kallok

Subject: Required Critical Parameter Report Under Industrial Wastewater Discharge Permit No. 1487

Dear Mr. Kallok:

Your Industrial Wastewater Discharge Permit was approved in the Districts' letter dated June 5, 1974. One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permit.

Your latest Critical Parameter Report was received on January 11, 1978. The Districts have reviewed this report and found that it is delinquent in the following areas:

☐ The analyses submitted by your company indicate that it is in violation of the Sanitation Districts' Phase I effluent limits, copy attached. Corrective actions must be taken to reduce the discharge of the parameters underlined in red on the attached copy of your report. A detailed description, and plans if necessary, of the required corrective actions must be submitted to the Sanitation Districts. Any proposed significant pretreatment system modifications must be approved by the Sanitation Districts prior to construction. Compliance with this requirement is necessary to ensure continued use of the public sewerage system for industrial wastewater discharge.

☑ The parameters underlined in red must also be reported as required on the Frequency of Laboratory Analysis Form issued with your Permit.

☐ You are not in compliance with the Districts requirements for the submittal of Critical Parameter Reports. Please submit a Critical Parameter Report on the items specified in your permit approval within 30 days of this letter and according to the required frequency thereafter.

☐ The Critical Parameter Report must be signed by a representative of your company.

☐ Other:

The above items must be completed and returned to the Sanitation Districts within 30 days of the date of this letter. If you have any questions regarding these requirements, please call the Districts' Industrial Waste Section at (213) 699-7411 or (213) 685-5217, extension 261.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager

By Jay G. Kremer
Jay G. Kremer
Head, Industrial Waste Section

JGK:FEJ:lc:ct

Encls.

NOTE: You are reminded that the critical parameters are to be determined and the report forms submitted to the Districts according to the following schedule:

1. Annual analysis -- July 1
2. Semi-annual analysis -- January 1, July 1
3. Quarterly analysis -- January 1, April 1, July 1, October 1

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

1/0A

RECEIVED
'86 NOV 26 PM 2 22
SO. ... SECTION
TO... ...NCES
DE... ...SER.

November 25, 1986

VIA FEDERAL EXPRESS

Ms. Therese Gioia
Environmental Protection Specialist
ENVIRONMENTAL PROTECTION AGENCY (T42)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

RE: Progress at the Montrose Site; Proposed Modification to Submittal Dates for Information From Current Drilling Activities

Dear Ms. Gioia:

Per our telephone conversation of November 19, this letter is to request postponement of the information submission (well and soil boring completion) Appendix A, Part III, B, 4, which is due after completion of the drilling round which is presently underway at the site. As we discussed, this postponement will enable Montrose to concentrate on completing the wells, installing the sampling equipment and attempting to obtain the two rounds of groundwater samples required by the plan prior to the Christmas holidays. My understanding was that we were both in agreement that the goal of achieving groundwater sampling capability prior to the Christmas holidays, and thereby avoiding delays in that aspect of the remedial work, was more important than the timely submittal of the routine boring logs. Therefore, the field personnel will be directed to concentrate their efforts on completing the drilling activities, supervising the installation of sampling equipment and sampling of the wells.

With your permission, Montrose will delay the submittal of the boring logs and other information and attempt to accomplish the following objectives:

1. Complete the installation of the four Gage wells and the four Bellflower wells.

2. Attempt to acquire and have installed the necessary sampling equipment as agreed to in the plan and subsequent correspondence.

3. Once the sampling equipment has been installed, attempt to obtain two complete rounds of samples and submit them for analysis prior to the Christmas holidays. Our proposed target date for submittal of the second round of samples to the laboratory would be during the week of December 19.

Ms. Therese Gioia
November 25, 1986
Page 2

4. Submission of the boring logs and other required information would be no later than the date of submittal of the analytical results. If the second round of samples can be delivered to the laboratory prior to or on December 19 we would expect that the analytical results would be forwarded no later than February 3, 1987, which is 45 days after the latest proposed sampling date.

Pending your approval, Montrose will strive to meet the deadlines of the objectives noted above. However, equipment availability, subcontractor coordination and availability, and other items which are beyond our control may impose unforseen delays. As has been the practice to this point, we will remain in close contact with the EPA and its oversight subcontractors at every phase of the upcoming work. Should unforseen circumstances arise which may necessitate the alteration of the above outlined effort we will, of course, be in contact with you as soon as possible for your advice and guidance.

Thank you for your continued timely and flexible approach to implementing the on-site sampling plan. If possible, please forward a short letter for the file noting your approval of the postponement of the routine information submission of the boring logs and other miscellaneous information. If you have any questions, please don't hesitate to contact me.

Sincerely,

HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

cc: See Attached

bcc: D. Hargis
R. Niemeyer
M. Wiedlin

MONTROSE CARBON COPY LIST:

Ms. Therese B. Gioia
EPA Coordinator (T-4-2)
US Environmental Protection Agency, Region IX
215 Fremont Street
San Francisco, CA 94105

Mr. Robert P. Ghirelli
Executive Officer
Regional Water Quality Control Board
107 S. Broadway, Room 4027
Los Angeles, CA 90012

Mr. Angelo Bellomo
Chief, Southern California Section
Toxic Substances Control Division
Department of Health Services
107 S. Broadway, Room 7128
Los Angeles, CA 90012

Mr. Dan Greeno
Montrose Chemical Corporation
Nyalia Farm Road
Westport, CT 06881

Karl S. Lytz, Esq.
Latham & Watkins
701 B Street
Suite 2100
San Diego, CA 92101

N/A

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa, Suite 300
La Jolla, California 92037
(619) 454-0165

Hazardous Materials Management
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AUG 29 1986
California Department of Health Services
LOS ANGELES

August 27, 1986

Therese B. Gioia
EPA Project Coordinator
EPA (T 4 2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, California 94105

RE: Start Date for On-Site Groundwater and Soil Sampling, Montrose Site, near Torrance, California

Dear Ms. Gioia:

We are pleased to have received EPA approval of the Part 2 On-Site Groundwater and Soils Phase I Sampling Plan and Quality Assurance Project Plan. We are in agreement with the rewording of the data submittal schedule which you recommended in your cover letter of August 22, 1986, and agree that your letter ammends the Sampling Plan accordingly.

We are presently making arrangements with several drilling contractors to conduct soil sampling and monitor well construction. Barring any unforseen problems with equipment availability, we expect to begin the on-site soil sampling on September 15.

Please find enclosed two signed copies of the Quality Assurance Project Plan as you requested. If you have any questions or require additional information regarding the scheduling of the on-site work, please contact me.

Sincerely,
Hargis + Associates, Inc.

Roger G. Niemeyer

Roger A. Niemeyer
Project Hydrogeologist

Enclosures

cc:
D. Greeno
K. Lytz
R. Ghirelli
N. Acedera

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa, Suite 300
La Jolla, California 92037
(619) 454-0165

AB

August 27, 1986

Hazardous Materials Management
RECEIVED
AUG 29 1986
California Department of Health Services
LOS ANGELES

Therese B. Gioia
EPA Project Coordinator
EPA (T 4 2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, California 94105

RE: Start Date for On-Site Groundwater and Soil Sampling, Montrose Site, near Torrance, California

Dear Ms. Gioia:

We are pleased to have received EPA approval of the Part 2 On-Site Groundwater and Soils Phase I Sampling Plan and Quality Assurance Project Plan. We are in agreement with the rewording of the data submittal schedule which you recommended in your cover letter of August 22, 1986, and agree that your letter ammends the Sampling Plan accordingly.

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Please find enclosed two signed copies of the Quality Assurance Project Plan as you requested. If you have any questions or require additional information regarding the scheduling of the on-site work, please contact me.

Sincerely,
Hargis + Associates, Inc.

Roger G. Niemeyer

Roger A. Niemeyer
Project Hydrogeologist

Enclosures

cc:
D. Greeno
K. Lytz
R. Ghirelli
N. Acedera

Secondary

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

MONTROSE SAMPLING PROGRAM

NOTICE OF MEETING CONSOLIDATION

Originally two community meetings were scheduled for September 22nd -- one for the test group and one for the control group -- to discuss sampling procedures. These meetings are being consolidated into a single meeting to be held at:

CARSON PUBLIC LIBRARY, 151 EAST CARSON STREET, CARSON
on Monday, September 22, 1986, 7 PM

The meeting previously scheduled for the Torrance Civic Center Library is cancelled.

If you have any questions about the sampling program or the meeting, you may call toll-free (800) 231-3075 and leave a message for Helen King Burke, Community Relations Coordinator.

5 September 1986

11/27/86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management
AUG 28 1986
California Department of Health Services
LOS ANGELES

AUG 25 1986

Edward Nemecek
Montrose Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Information Needs for EPA's Review of Montrose Off-site Sampling Results

Dear Mr. Nemecek:

EPA is currently conducting the quality assurance/quality control review of the Montrose sampling results for the Off-site Soils, Sediment, and Surface Water Sampling. Additional information is required from Brown & Caldwell Laboratories in order to complete the review. Enclosed is a list of the information we need. The list is consistent with Appendix B-2 of Montrose's Off-site Quality Assurance Project Plan. Please have the information sent directly to me.

If you have any questions, feel free to call. If Brown & Caldwell laboratory personnel have any questions regarding this request, please have them call P.K. Chattopadhyay or Sean Kennedy of Ecology & Environment, Inc. at (415) 777-2811.

Sincerely,

Therese Gioia

Therese Gioia
Remedial Project Manager

Enclosure

cc w/out enclosure:

D.M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS
P.K. Chattopadhyay

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NESHER

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
AUG 28 1986
California Department of Health Services
LOS ANGELES

AUG 2 2 1986

Edward Nemecek
Montrose Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Approvals for Part 2 On-site Groundwater & Soils Phase I Sampling Plan and Quality Assurance Project Plan

Dear Mr. Nemecek:

We have reviewed the Part 2 On-site Groundwater and Soils Phase I Sampling Plan and Quality Assurance Project Plan (QAPP). One change needs to be incorporated into the Sampling Plan. In the text of the plan you state that the wells will be sampled after pumps are installed and again approximately two weeks later. In the schedule you define the end of "Round II" as being after the collection of the second set of groundwater samples, at which time the 45-day schedule for submitting analytical results begins. I am sure you can understand that EPA would find it difficult to enforce a schedule based on an approximate length of time. However, we are willing to accept the schedule proposed in the plan if the second set of samples is taken within two weeks of the first set, rather than approximately two weeks after the first set.

For the purpose of complying with the schedules established by the Consent Order, this new schedule will mean that the 45-day time limit for submission of analytical results from groundwater sampling will commence after the second set of samples is taken or two weeks after the first set is taken, whichever is sooner. This letter will serve as an amendment to the Sampling Plan if you agree to this approach. Unless informed otherwise, we will assume you accept this letter as an amendment to the Sampling Plan, and we will consider this letter the approval for implementation of the plan.

The QAPP is hereby approved as written and amended by your letter, dated August 14, 1986. Enclosed are copies of the approved QAPP for your signature. Please return two signed copies to EPA. The third copy is for your records.

We look forward to receiving notice of the start date for the field work. If you have any questions, please feel free to call me at (415) 974-7726.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

Enclosures

cc w/out enclosures:

D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

N2A

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

August 14, 1986

Ms. Therese B. Gioia
EPA Project Coordinator (T-4-2)
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX
215 Fremont Street
San Francisco, California 94105

Re: Amendment to On-Site QAPP; Revision of Casing Material Type; Montrose Site near Torrance, CA

Dear Ms. Gioia:

Per our telephone conversation of August 13, 1986 enclosed please find Appendix B-2 from the Montrose Off-Site QAPP. This appendix should be appended to the Montrose On-Site QAPP and amends the On-Site QAPP accordingly.

Per our telephone conversation of August 14, 1986 and your decision regarding the type of stainless steel casing to be used at the site, Montrose agrees to use the 316 stainless in place of the 304 type as presently stated in the Sampling Plan. We look forward to EPA's approval of the plan and if you have any questions please don't hesitate to contact me.

Sincerely,
HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

EAN/ab
Enclosure

cc: Karl S. Lytz, Esq.
Dan M. Greeno
Robert P. Ghirelli
Angelo Bellomo

Hazardous Materials Management
California Department of Health Services
LOS AN

HARGIS + ASSOCIATES, INC.

APPENDIX B-2

EPA OUTLINE FOR LABORATORY DATA PACKAGE

In order to ensure the validity of the reported analytical results, the status of the following criteria which determine the quality of the analytical data need to be ascertained:

1. Stability of the sample(s) analyzed.
2. Performance of the instrument(s) used for analyses.
3. Possibility of sample contamination.
4. Identification and quantification of the analyte(s) in the sample(s) analyzed.
5. Precision in analyses.
6. Accuracy of the results reported.

Documents required to establish the status of the above criteria during sample analysis are summarized in the following sections:

1. Stability of Sample(s) Analyzed

To establish the stability of the environmental samples analyzed the lab will provide the following:

1(a). Chain-of-custody paper for each sample received.
1(b). Date and time of both extraction and analysis of each sample.

2. Performance of the Instrument(s) Used for Analysis

Analytical methodology for analyzing the samples will determine the type of the instrument(s) to be used by the lab. To demonstrate the working condition of the instrument(s) during analyses the lab will submit the following:

2(a). Detection limits for all the HSL compounds analyzed.
2(b). For GC/MS analysis, a final tune mass spectrum and the quantitation report for the GC/MS tuning compound on each day prior to any analysis.
2(c). Data for the initial and continuous calibration of the instrument including the response factor (or calibration factor) for each compound to be analyzed. (The instrument will be calibrated initially using standard solutions, as specified in the protocol, and the initial calibration will be varified on each day prior to sample analysis.)
2(d). Raw data (i.e., Data System print-outs or integration reports) for all standard solutions analyzed in both initial calibration and continuous (i.e., daily on-going) calibration.
2(e). Identification of each instrument used for analyses.

3. Possibilities of Sample Contamination

Each day prior to any analysis the lab will analyze the 'Method Blank' and submit the following:

3(a). Dual Mass Spectrum for each HSL compound identified in the 'Method Blank' (or, Chromatogram of the 'Method Blank' with each peak labelled).
3(b). Raw quantification report (i.e., data system print-outs) or integration reports.

[To determine the possibilities of instrument contamination (i.e., carry-over from previous analyses) 'Method Blank' should be analyzed frequently in between sample analyses as specified in the protocol. Lab will provide all documents of replicate 'Method Blank' analyses as described in Sections 3(a) and 3(b) above.]

4. Identification and Quantification of the Analyte(s) in the Sample(s) Analyzed

4.1 GC/MS Analysis

If the sample(s) was/were analyzed by GC/MS, the lab will submit the following:

4.1a. Information regarding dilution/concentration factor in the extraction of the sample prior to the analysis.
4.1b. Unenhanced and enhanced mass spectrum of each HSL compound identified in the sample.
4.1c. Quantification report (i.e., data system print-outs) for the sample analyzed.
4.1d. Laboratory generated standard spectra for all HSL compounds identified in the environmental samples.
4.1e. Identification of the instrument used for the analysis.

4.2 GC Analysis

If the sample(s) was/were analyzed by GC method, the lab will submit the following:

4.2a. Information regarding dilution/concentration factor in the extraction of the sample prior to analysis.
4.2b. Sample chromatogram with all peaks identified.
4.2c. Raw data (i.e., Integration reports) showing retention time and peak area/peak height counts for each identified HSL compound peak.
4.2d. Identification of the instrument used for the analysis.

5. <u>Precision in Analysis</u>

On each day of analysis, a definite percent of the total environmental samples (to be analyzed on that day) will be analyzed in duplicate.

To establish the precision in the reported results the lab will submit the following documents:

5(a). Results and raw data for all duplicate analyses. QC raw data for all duplicate analysis will be the same as described in Section 4 in this report.

6. <u>Accuracy of the Results Reported</u>

On each day of analysis at least one 'Method Blank' and a definite % of the environmental samples analyzed on that day will be spiked with a known amount of a "Spiking Standard Solution', and all spiked samples will be analyzed by using the same analytical methodology and instrument(s) as used in the analyses of environmental samples on that day. Data for review will include the following:

6(a). Results and QC raw data for spiked samples analyses as described in Section 4 of this report.

Finally, after reviewing all QC/QA documents as described above the reviewer will apply his professional judgment and experience to evaluate the validity of the reported results.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

4 AUG 1986

Edward Nemecek
Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Montrose site in Los Angeles, near Torrance

Dear Mr. Nemecek:

In our telephone conversation of July 28, you expressed your desire to collect and analyze another set of ground water samples and measure water levels in the existing on-site wells at the Montrose site before you install the new on-site wells. You also pointed out that Montrose was reluctant to undertake such activities because all field work conducted without EPA approval is prohibited by the Consent Order and subject to penalty.

EPA requires Montrose to comply with a rigorous approval process in order to ensure that the data collected during field activities is of sufficient quality to be used in the Feasibility Study. All data collected for use in the Feasibility Study must undergo the quality assurance/quality control established by EPA, as outlined in the Consent Order. As you know, EPA ensures data quality by requiring Montrose to submit sampling plans and quality assurance project plans which meet the approval standards. This data quality standard cannot be comprised by circumventing the approval process.

However, there may arise a need for general purpose data which aid in the conduct of the investigation without directly contributing to the Feasibility Study. I believe your request to undertake this additional sampling of existing on-site wells represents such a need. As long as you agree to the following conditions: 1) the data collected during such field work can only be used to aid in the investigation, with no expectation of it being used directly in the Feasibility Study; 2) the results of sampling, measuring, and analysis is provided to EPA when available; and 3) this is recognized to be an isolated case and does not represent a waiver of the established approval process, EPA will consider the field work "approved" so that Montrose can proceed with this particular sampling effort without fear of penalty under the Consent Order.

If you have any questions, please feel free to call me.

Sincerely,

Therese B. Gioia

Therese Gioia
EPA Project Coordinator

cc: D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, CADOHS

6e1101110

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

July 30, 1986

Hazardous Materials Management Section
JUL 31 1986
California Department of Health Services
LOS ANGELES

Ms. Therese Gioia
Environmental Protection Specialist
EPA (T42)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

RE: Final On-Site Sampling Plan; Final QAPP;
Montrose Site, Torrance, California

Dear Ms. Gioia:

Enclosed please find three (3) copies of the reports:

QUALITY ASSURANCE PROJECT PLAN
PART 2
ON-SITE GROUNDWATER AND SOILS SAMPLING PLAN
MONTROSE SITE
TORRANCE, CALIFORNIA

PART 2
REMEDIAL INVESTIGATIVE WORK
ON-SITE GROUNDWATER AND SOILS INVESTIGATION PHASE I
MONTROSE SITE
TORRANCE, CALIFORNIA

We look forward to your approval of the plan. Please contact me if you have any questions.

Sincerely,

HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

cc: R. Ghirelli, RWQCB (w/enclosures)
A. Bellomo, DOHS (w/enclosures)
D. Greeno, Montrose (w/enclosures)
K. Lytz, Latham & Watkins (w/enclosures)

Acedera

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
JUL 21 1986
California Department of Health Services
LOS ANGELES

JUL 17 1986

Ed Nemecek
Montrose Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: EPA Comments on the Part 2 On-site Groundwater and Soils Plans Phase I for the Montrose site in Los Angeles

Dear Mr. Nemecek:

We have received Karl Lytz's letter explaining your new approach for well construction materials and sampling/purging equipment. We are pleased that you have addressed our comments in these two areas and adopted an approach we can approve. You have agreed to install 4 inch wells using stainless steel 316 well screen construction materials and to use positive displacement pumps for sampling the wells.

Please find enclosed the remaining EPA comments on the Part 2 On-site Groundwater and Soils Sampling Plan and Quality Assurance Project Plan (QAPP) Phase I. These comments, as well as your new approach for well construction and well sampling/purging equipment, should be incorporated into revised documents and submitted to EPA for approval. Please submit the revised documents as soon as possible, but no later than August 1, 1986.

If you have any questions, please call me at (415) 974-7465.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

Enclosure

cc w/enclosure:

D.M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

BOE-C6-0178190

Final EPA Comments on the Montrose Part 2 On-Site Groundwater and Soils Sampling Plan and Quality Assurance Project Plan (QAPP) Phase I

SAMPLE PLAN

1) Page 7, paragraph 1: Revise the soil sampling methods to reflect which 24 samples will be analyzed and which 24 wil be extracted but not analyzed. It is not very clear now.

2) Table 2: Address the Holding Times for the different types of analyses, including samples and extracts of samples.

3) Page 8, last paragraph: Include rationale for location of exploratory boring; it is located in an area thought to be the least contaminated area of the site. Note that although this boring is located in potentially less contaminated area, the risk of cross contamination of the Gage Aquifer is not eliminated.

4) Page 9 and Page 10: Why do you keep making the point that construction of the BF wells will be similar to the existing monitoring wells? This is not true. The existing wells only screen approximately 5 feet of the aquitard and are constructed with PVC screens. The BF wells will screen at least 15 feet of the aquitard and will have stainless steel screen on PVC casing.

5) Page 10, paragraph 2: Simple removal of 3 casing volumes of well water is not a proper development procedure. Describe it here or reference section where it is described.

6) Page 10, paragraph 3: Describe the type of bladder pump, component materials and types, and how it will be used for both purging and sampling.

7) Page 10 bottom and Page 11 top: G-2 is not located downgradient if direction of flow in Gage is southeasterly. G-2 may also not be sufficiently downgradient if flow is easterly. As G-2 may not pick up potential contamination from the suspected source then be aware that this location increases the potential for the installation of the fourth Gage well.

8) Page 11, paragraph 1. What is sufficient penetration of the Gage Aquifer? We agreed that 15 to 20 feet of screen would be used in Gage wells.

9) Page 11, paragraph 2: Development procedures must be described in detail. Simply removing 3 casing volumes of well water is not considered proper development procedure.

10) Page 11, last paragraph. Revise the pump discussion to reflect the type of pump, describe what materials the components parts are made of, and how it will be used for pumping/sampling.

11) Page 12, paragraph 2: Pages referenced in Appendix are incorrect.

12) Page 14, paragraph 1: Revise last sentence to read, "The frequency of additional sampling efforts will be determined as agreed upon by EPA and Montrose and will be conducted by Montrose."

13) Page 14, paragraph 2: Reference QAPP discussion of equipment calibration and calibration frequency.

14) Page 16, paragraph 2: S201 is not on NE-SW axis as agreed between Hargis and EPA. This array was not designed by EPA but agreed upon between Hargis and EPA after discussion. The 60-foot borings are located at approximate 20-foot intervals from center of the pond as opposed to "varying distances."

15) Page 16, paragraph 3. Will the other 20 samples not extracted be saved by lab for potential analysis. This scheme needs to be explained in detail with revision of discussion in earlier pages of this plan.

16) Page 18, paragraph 1: Backfilling borehole with drill cutting is acceptable if the cuttings are mixed with a bentonite slurry and the top ten feet below ground surface is cemented.

17) Appendix A, page A-9 thru A-11: The specific policy outlined in the Federal Register shall be followed. Paraphrasing is acceptable but it must be clear that when and if discrepancies arise between the policy and the paraphrasing in this document, the actual policy as written in the Federal Register, must be followed.

QAPP

1) Approval Page: EPA QA Officer is Kent Kitchingman.

2) Page 5, paragraph 2: Add 1,3-dichlorobenzene to list of the Target Chemicals, as listed on Page 9.

3) Page 11: Need to include continuous sample collection in the first Bellflower and Gage Wells, with sieve analysis on water bearing formation to determine screen size. Revise construction method to reflect use of stainless steel screens in both Belltlower and Gage Wells.

4) Page 18: Need to address frequency of pesticide and common ion blank samples. One pesticide blank sample should be included per day. Since the common ion samples are only for aquifer characterization, the inclusion of blanks is recommended but not required.

5) Page 25, Table 1: The information on sample volume for the soil pesticide sample is incomplete. In addition, since only one brass sleeve will be collected and separate oliquots used for volatile and pesticide analysis, a footnote should be added to clarify this point.

6) Page 27, paragraph 1: The soil cuttings discussion is not consistent with same discussion in Sampling Plan. The Sampling Plan states the cuttings will be backfilled within 10 feet of surface and that top 10 feet will be filled with cement. The QAPP should be revised in accordance with Sampling Plan comment #16.

7) Page 27, paragraph 2: The specific offsite disposal policy outlined in the Federal Register and referenced here shall be followed. Paraphrasing is acceptable as long as it is stated that if and when discrepancies arise between paraphrasing in this document and the actual policy as written in the Federal Register, the actual policy shall be followed.

8) Page 29, Logging: Be specific on when and where continuous core samples will be collected. Describe the type of grain size analysis to be conducted (sieve analysis?). Record the number of blow counts when drilling with a hollow stem auger.

9) Page 32, pH calibration: Corrections/adjustments for variation between the buffer temperature and sample temperature should be performed.

INC

10) Page 41, Table 2: The method cited for Total Dissolved Solids is incorrect. EPA method 160.3 is for Total Residue, i.e., suspended and dissolved solids. The EPA method for Total Dissolved Solids is 160.1.

11) The method cited for Boron, 404B, the carmine colorimetric method, is not an EPA-approved method. Boron can be analyzed by 404A (EPA 212.3) the curcumin colorimetric method, or EPA 200.7 and ICP method. "ALPHA" should be "APHA."

12) Page 44, Section 11.2.1: Describe frequency for collection of pesticide blanks. One per day is recommended. See QAPP comment #4.

13) For your information: The maximum holding time for Ca, Mg, Na, K, B, and Si can be extended to 6 months if the samples are preserved with HNO_3 to a pH<2. The maximum holding time for pesticides is 7 days until extraction and 40 days from extraction to completion of analysis.

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

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(619) 454-0165

July 3, 1986

Hazardous Materials Management Section
JUL 17 1986
California Department of Health Services
LOS ANGELES

VIA FEDERAL EXPRESS

Ms. Therese B. Gioia
Environmental Protection Specialist
EPA (T 4 2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

RE: Montrose Site near Torrance; Sampling Round 1
Raw Analytical Results

Dear Ms. Gioia:

In the raw analytical data submitted on July 27, 1986 for the Round 1 Off-Site Sampling at the Montrose, Torrance site, the laboratory inadvertently labeled our decontamination rinsate samples as groundwater samples. As you are aware, no groundwater samples were collected during off-site activities.

I apologize for any confusion this may have caused. The laboratory has been advised of the problem so it should not occur in the future.

If you have any questions, please contact me.

Sincerely,

HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

cc: R. Ghirelli, RWQCB
✓A. Bellomo, DOHS
D. Greeno, Montrose
K. Lytz, Latham & Watkins

Acedera

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
JUL 7
Department of Health Services
LOS ANGELES

JUL 2 1986

Karl Lytz
Latham and Watkins
701 B Street, Suite 2100
San Diego, CA 92101-8197

Re: Montrose Chemical Site, Los Angeles

Dear Mr. Lytz:

Thank you for your comments on the EPA Part I Remedial Investigation (RI) Report for the Montrose site, which were sent to Therese Gioia. Although we do not agree with all of your comments, we appreciate your effort in reviewing the report.

We plan to address your comments by letter and make any appropriate changes to the report in an appendix amending the report. We do not feel a full revision is necessary as this is only a partial RI report and the final RI report will incorporate all changes to the Part I report. The letter and appendix will be completed by late July.

In regard to your request for copies of other agency comments, EPA did not receive any comments from other agencies. Most of the comments at the community meeting related to concerns about the community's drinking water supply and future sampling efforts at the Montrose site.

As we have discussed before, I would appreciate it if you would send all correspondence from your office directly to me. If you have any questions, please call me at (415) 974-8043.

Sincerely,

John E. Sielma for
Lisa Haage
Assistant Regional Counsel

cc: D.M. Greeno, Montrose
E. Nemecek, Hargis & Associates
R. Ghirelli, RWQCB
N. Acedera, DOHS

BOE-C6-0178196

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AB

June 4, 1986

JUN 05 1986
Department of Health Services
LOS ANGELES

Therese B. Gioia
Environmental Protection Specialist
EPA (T 4 2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

Re: Round One Sampling, Montrose Site, Torrance, CA

Dear Ms. Gioia:

As per your letter dated May 15, 1986, specifying the close of the partial round one of off-site soil sampling and as required by Appendix A of Consent Order 85-04, please find enclosed boring logs, OVA measurements, weather condition information and boring location maps from round one of the offsite soil, sediment and surface water sampling near the Montrose site. As stipulated in your letter, round one data submitted herein do not include information from proposed sampling locations on Farmer Brothers property as access has not yet been secured.

If you have any questions regarding the enclosed information, please contact our office.

Sincerely,
HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
bm

Edward A. Nemecek
Senior Associate

EAN/jk
Enclosures

cc: Robert Ghirelli (w/o enclosures)
Angelo Bellomo (w/o enclosures)
D.M. Greeno (w/o enclosures)
Karl Lytz (w/o enclosures)

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May 19, 1986

Hazardous Materials Management Section
MAY 23 1986
California Department of Health Services
LOS ANGELES

Therese Gioia
United States Environmental
Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Re: Draft Preliminary Report on Montrose - Torrance Site

Dear Therese:

Thank you for providing us the opportunity to review Metcalf & Eddy, Inc.'s Draft Preliminary Report, Remedial Investigation Part 1, Montrose Facility Site (Los Angeles, California) (the "Draft Report"). Our comments are presented below.

A. Specific Comments

1. Pages 2-5 (text): The Draft Report states that the type of products manufactured in Montrose's on-site Special Products Plant is unknown. Let the record show that this plant was used to blend technical grade DDT with talc in order to produce 75% DDT and 10% DDT powders and was never used to produce chemical products other than blends of DDT.

2. Page 9: The Draft Report states that the initial investigations conducted by Montrose in 1983 were not performed under EPA-approved plans. This statement is

incorrect. Plans for this activity were in fact approved by EPA in its letter to Montrose dated July 12, 1983.

3. Page 9: The Draft Report states that the results of Montrose's initial soils investigation "showed that the upper 3 feet of on-site soils contained 300 to 400 tons of DDT." The results of Montrose's investigation did not "show" this to be a fact. Instead, the results were used by Metcalf & Eddy, Inc. to calculate estimated quantities of DDT in the upper 3 feet of soil. The fact that the 300-400 ton figure is a calculated estimate as opposed to a fact should be clarified.

4. Page 9-10: The Draft Report states that the berm constructed in 1983 was "intended" to prevent stormwater runoff from leaving the site. The statement implies that the berm was not effective for that purpose despite a complete lack of evidence to support such a proposition. The word "intended" should be deleted from the statement.

The Draft Report states that EPA found Montrose's proposed remedial plans to be unacceptable. This statement should be clarified by a discussion of Metcalf & Eddy's Review of Proposed Response to EPA Enforcement Order No. 83-1(November 1983). Based on that analysis and the extensive discussions between Montrose and EPA during the period of August - December, 1983, it is misleading to imply that the plans were "unacceptable" or that the submission of "unacceptable" plans resulted in EPA's proposed inclusion of the site on the NPL. On page 10, it should also be stated that the site has not yet been included on the NPL and that federal law does not unequivocally mandate the performance of a formal RI/FS for sites that are proposed for inclusion on the NPL.

5. Page 10, paragraph 2: Site capping was performed during the period of January through April 1985, not in April 1985 alone. Grading was not performed solely to create building pads as is stated, but in fact was conducted primarily for the purpose of making surface conditions suitable for capping. Capping was not performed "to prevent surface runoff." Capping was in fact performed to preclude any future release of contaminants from the site by:
1) preventing stormwater runoff from coming into contact with and mobilizing any DDT-contaminated soils;

2) precluding any airborne dispersion of any contaminated soils by sealing the site, and 3) eliminating the possibility of vertical contaminant migration by preventing stormwater percolation through soils.

The Draft Report further states that the capping program was neither authorized nor endorsed by EPA. To be accurate, the Draft Report should state that: 1) EPA and Montrose agreed that site capping would prevent further migration of any on-site contaminants and facilitate future investigative activity; 2) plans for this project were closely coordinated with EPA, the South Coast Air Quality Management District and other relevant agencies, but; EPA did not endorse the project as the final remedial action for the site.

6. Page 10, paragraph 3: The Draft Report states that Montrose's 1985 groundwater investigation was also not conducted under EPA-approved plans. As noted in comment 5 above, prior investigation plans had been approved by EPA. The word "also" should be deleted. Additionally, it should be stated here that the number and location of the 1985 monitor wells accorded with the EPA RI/FS Workplan and that EPA has since concluded that the construction of these wells provides for adequate quality control of analytic results (as is stated later in the Draft Report). It is also incorrect to state that the validity of Montrose's analytic results cannot be verified; Montrose's analytic results can be verified based on existing documentation, the procedures followed, laboratory quality assurance procedures, etc. The taking of sample splits by EPA or any other agency is not a prerequisite to determining the validity of analytic results.

7. Page 18, paragraph 2: The Silverado Aquifer is not the main water supply to the West Coast Basin. Most water used in the Basin is imported from other sources in the state. In the Torrance area itself, the Silverado appears to be a minor, secondary water supply source.

8. Page 32: This page contains the explanation of the "J" designation assigned to certain analytic results obtained by EPA to indicate their limited utility. The explanations provided, however, do not adequately explain the numerous "J" designations assigned to soil sampling analytic results.

A full explanation of the "J" designation must be provided, especially since it is so prevalent in the soil analytic results reported for acetone, benzene, chloroform, dichlorobenzene and BHC. Of the approximately 298 analytic results reported for those chemicals, 150 are indicated as being below detection limits for the analyses performed and 115 are reported as having limited utility. Only 33 (approximately one percent) of 298 analytic results indicate unquestioned results above detection limits. Similar problems appear to be have been encountered with MCB. Additionally, the designation "U" is frequently assigned to MCB results, a classification which should also be explained.

We are particularly troubled by the fact that for certain chemicals few if any of the analytic results are indicated as being completely accurate. For example, of the 45 acetone analytic results reported, 43 are assigned a "J" and one is reported as being less than detection limits. Moreover, the majority of the on-site "J" analytic results for acetone are in the same range concentration as the off-site acetone results. Notwithstanding these facts, the Draft Report concludes on page 58 that high acetone groundwater readings may be explained by concentrated input of acetone over time, "probably due to extensive leakage from the surface impoundment," and perhaps from other on-site sources given its purported widespread distribution in on-site soils. Based on the quality of the data, not to mention the fact that acetone is a chemical which to the best of our information and belief was never used in quantity by Montrose during its operations at the site, such conclusions are suspect, speculative and completely unsupportable.

A similar problem exists with respect to benzene. Thirty-six analyses are reported, 35 of which are below detection limits (i.e. less than 5 ppb), one of which is reported as "5J." Nevertheless, the Draft Report suggests on page 59 that the absence of benzene from on-site soils may be the result of volatization or flushing. The only probable conclusion is that the Montrose site was not a source of benzene contamination in groundwater since there are no significant concentrations in on-site soils and since Montrose did not use benzene in its operations. Moreover, the Draft Report's reference on page 59 to 8-500 ppb benzene at hole 35D is incorrect. As we read the table, those figures relate to chloroform, not benzene. Thus, the conclusion on page 59 that the "presence [of benzene] at a depth of 9.5 feet of soil is more likely due to use and consequent infiltration near 35D" is based on a complete misreading of the analytic results.

9. Page 39, Figure 7: This figure purports to represent the area where HNu readings are greater than 100 ppm. Explanation of this figure is required since the extrapolations of the estimated 100 ppm contour bear no intuitively obvious relationship to the data presented. Why, for example, should the 100 ppm contour be extended approximately 150 feet west of boring 14D when there is no intervening data point and the next closest reading at 13D, only fifty feet from the contour line, is 7.1 ppm?

10. Page 40, Figures 8-11: The word "aerial" refers to atmospheric conditions and is used incorrectly in the third paragraph (as well as elsewhere in the Draft Report). "Areal" is the correct term although "horizontal" would be equally accurate and more readily understood.

The "order of magnitude" interpretations of DDT data are extremely confusing. Further explanation of these figures is required in the event they are to be included in the final report (which they should not be). We do not understand what the figures are intended to depict, nor do we see how the data support many of the contours drawn. While it is stated that the figures are presented strictly for "conceptual purposes," we do not understand the concept, the purported utility of the "conceptual purpose," or the necessity for engaging in conceptualization at this point in the investigative process.

11. Page 46: MW-2 was installed adjacent to the former surface impoundment, not in the middle of it.

12. Page 47, Figures 12 and 13: The Draft Report should reserve judgment on Bellflower groundwater flow gradients and directions. While we too suspect that flow is to the southeast in the Bellflower, additional data are required to verify this conclusion. Such data will be developed during Montrose's Phase 1 on-site groundwater investigation.

13. Page 52, first paragraph: This paragraph indicates that the Montrose site is within 2 to 3 miles of a

"major groundwater pumping center" which exists in an area where the Lynwood and Silverado aquifers merge. We assume that the "major groundwater pumping center" refers to Dominguez Water Corp. Well #19, which is located approximately 2 to 3 miles southeast of the site.

Based on the geologic cross-sections for the area, it does not appear as though the Lynwood and Silverado aquifers merge in the area of Well #19, nor that the Gage is in hydraulic continuity with them. See Figures 2.3 and 2.4 of Hydrogeologic Assessment, Del Amo Site (Ecology and Environment, Inc. 1983). Since there is apparently only one operating water supply well in this area (and since that well is reportedly used as a peak demand supply well which accounts for no more than 10% of the water supplied by the Dominguez Water Corp.), the characterization of this area as a "major groundwater pumping center" is highly questionable, as is the conclusion that this is an area where the Lynwood and Gage aquifers merge.

14. Page 53, third paragraph: Montrose never manufactured lindane, chloroform or benzene at the site, nor, to the best of our information or belief, did Montrose ever use any of those chemicals on-site in quantity, if at all. Nevertheless, the Draft Report hypothesizes that lindane may have been produced at the Montrose Special Products Plant, and based on this assertion associates Montrose with conditions unrelated to its former operations at the site. Here, as elsewhere, the Draft Report employs speculation and innuendo to imply conclusions that are contrary to fact. The Draft Report should be nothing more or less than an objective presentation of known facts; it should not be a sounding board for uninvestigated speculation.

15. Pages 58 - 60: See comment 8 above.

16. Page 60 (Conclusions and Recommendations): Most chemicals found in on-site soils (assuming here that the relevant analytic results are valid) and groundwater were not used in the manufacture of technical grade DDT.

B. General

Based on our initial review of the Draft Report, it is apparent that several general problems must be corrected. First, the quality of the analytic results obtained have to be fully explained. The prevalence of "limited purpose" and "less than detection limit" analytic results raises significant questions as to the validity of the conclusions reached. If there is little confidence in the data, then confident conclusions cannot be reached. The on-site source discussions should be eliminated for this reason alone.

Additionally, however, the Draft Report itself acknowledges that its on-site source conclusions are "ideas," Draft Report at p. 60, and that the chemical distributions observed cannot be explained on the basis of the present data, id. at p. 62. We add to these observations the fact that many conclusions are also based on an inaccurate or nonexistent understanding of Montrose's historic activities at the site. (For example, the fact that Montrose did not use or produce acetone, benzene, chloroform or BHC in quantity, if at all).

The purpose of the RI/FS process is, in part, to gather data of sufficient quantity and quality to reach confident conclusions. The investigative process, and indeed its mainstay, is ongoing. Until the data is gathered, it is premature at best to reach "conclusions" of the nature expressed in the Draft Report. Regardless of timing, however, it is completely inappropriate for a document which should be a scientific presentation to present unsubstantiated conclusions based on unsupportable speculations. Accordingly, we recommend that the Draft Report be limited to a presentation of relevant background information, of the investigation's scope, procedures and analytic results, and of recommendations with respect to additional data needs.

LATHAM & WATKINS

We would appreciate your providing to us a description of any significant comments made on the Draft Report during the community meeting on May 13, as well as a copy of any comments submitted to you by other agencies.

Please call if you have any questions.

Very truly yours,

Karl S. Lytz
of LATHAM & WATKINS

cc: Daniel M. Greeno
Edward A. Nemecek
Hank Yacoub
Angelo Bellomo

KSL-04L:05

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FROM

Nestor O. Acedera, Chief
Assessment & Mitigation Unit
Southern California Section
Toxic Substances Control Division

DATE: 7/17

RE:

✓Appropriate Action
__Initial & Circulate
__For Information Only
__Let's Discuss

MESSAGE/REMARKS

Bellomo

LATHAM & WATKINS

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July 10, 1986

JUL 14

Therese B. Gioia
Environmental Protection Specialist
United States Environmental
Protection Agency (T-4-2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, California 94105

Re: Montrose Chemical Corporation
of California - Torrance Site

Dear Therese:

In response to your letter of May 27, 1986, and to confirm the results of subsequent telephone conversations between yourself and Ed Nemecek, Montrose will construct its on-site monitor wells with four- (4) inch PVC casing above the water level and type 316 stainless steel below the water level. Samples from these wells will be taken using approved positive displacement bladder pumps, which your "Practical Guide for Groundwater Sampling" rates as superior to bailers. The Montrose Remedial Investigative Work On-Site Sampling Plan will be amended accordingly.

We appreciate your having forwarded to us the various technical documents upon which your well construction and sampling procedure recommendations were based, and your allowing the time required for our review of the issues involved. In order to expedite approval of the On-Site plans, we would also appreciate early receipt of your remaining comments on the most recent draft so that a fully amended version of the document can be submitted for final review.

Please do not hesitate to call either Ed Nemecek or me should you have any questions.

Very truly yours,

Karl S. Lytz

Karl S. Lytz
of LATHAM & WATKINS

cc: Daniel M. Greeno
Robert P. Ghirelli, RWQCB
Angelo Bellomo, DOHS
Lisa Haage, EPA

KSL003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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215 Fremont Street
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27 MAY 1986

Hazardous Materials Management Section
MAY 30 1986
California Department of Health Services
LOS ANGELES

Edward Nemecek
Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Montrose site in Los Angeles, near Torrance

Dear Mr. Nemecek:

This letter is in response to your letter of April 23, 1986 which accompanied the revised Montrose On-site Groundwater and Soils Sampling Plan and Quality Assurance Project Plan (QAPP). Despite our previous conversations to the contrary, you indicated that Montrose will not revise its plan to use PVC construction materials for the wells or permanent pumps for groundwater sampling. Your stated reason for your position was "lack of evidence" that either approach was not suitable. Such a statement indicates that you have a fundamental misunderstanding of who has the burden of proof in situations like this. If we are to make progress on this project, it is vital that Montrose proceeds in a manner acceptable to EPA.

When you propose a technical approach for the Remedial Investigative Work (RIW), it is your responsibility to provide your technical (as opposed to financial) rationale for that approach. EPA's most important concern is that the RIW conducted by Montrose is technically sound. We rely on Montrose to prove that the technical approach it is proposing is acceptable by providing its technical rationale behind the approach. EPA can then provide its technical comments on the rationale. Once Montrose receives EPA's comment, it is Montrose's responsibility to refute the comment with proof to the contrary or accept it and revise its technical approach accordingly. Despite your apparent opinion to the contrary, EPA's comments on the Montrose technical approach are not unfounded and must be addressed by Montrose with proof.

Inasmuch as Montrose has not provided any evidence that PVC is a suitable well construction material (taking into consideration the contaminants of concern) or that use of the proposed permanent pumps for collection of groundwater samples (again taking into consideration the contaminants of concern) will not affect the representativeness of the groundwater samples, I feel compelled to provide the evidence to support EPA's comments. This is contrary to the process discussed above, but unless we reach some agreement on these two issues, the plans will not be approved by EPA. I believe that as a professional in your field, you are aware that the use of PVC constructed wells for the monitoring of certain constituents has been called into question by many experts. If you intend to refute the existing evidence, please do so, but it is inaccurate to represent to anyone, including your client, that the well constuction material issue is a novel concept. If you are unaware of the existing evidence, please familiarize yourself with the available literature.

There is a large body of literature that indicates that PVC is not compatible with certain organic constituents, including chlorobenzene. The literature indicates that PVC is subject to deterioration from exposure to many aqueous organic mixtures, again including aqueous chlorobenzene mixtures (see Enclosure 1). In addition, the literature also indicates that PVC may bias the sample through adsorption or desorption of chemical constituents (see Enclosure 1). EPA has also produced technical guidance on monitoring well construction which also explains why PVC is not a suitable well construction material for this site (see Enclosure 2). EPA realizes that Teflon® and stainless steel 316 are more expensive than PVC, and I tried to address your concern for the added expense in the most recent technical meeting by suggesting that only the screened interval of the well need be constructed of Teflon® or stainless steel 316. However, the primary consideration is that the wells are constructed to be usable for monitoring over an extended period of time and yield accurate, representative data from unbiased samples.

The permanent pump issue is much easier to address as EPA's position is uncontroverted. First, let me clarify EPA's position. During the last technical meeting you clarified the type of constant displacement submersible pump you proposed to use as being a centrifugal-type suction pump. EPA cannot approve the use of such a pump for sample collection because the use of a suction-type pump reduces the pressure of the water being pumped which may cause degassing of the sample and loss of volatiles. EPA is not against the use of permanent pumps, we are against the use of permanent pumps which contribute to the loss volatile constituents from the sample. Please see the Enclosures 3 and 4 for discussions of the various sample collection options. EPA will accept the use of permanent pumps which do not contribute to stripping of volatiles from the sample or other problems which may affect the representativeness of the sample. EPA will also accept purging of the well with a suction-type pump as long as the sample is collected with an acceptable device.

Please note that under CERCLA, EPA must follow the relevant and applicable requirements of RCRA, therefore, the RCRA Technical Enforcement Guidance Document carries a great deal of weight in deciding the technical issues on CERCLA projects. Consider this letter to be EPA's final decision on the well construction materials and permament pump issues. We ask that you revise the plans accordingly.

It is important that we resolve these matters as soon as possible. There is no point in EPA submitting its other comments on the revised plans if these two issues are not resolved first. Please notify me on how you plan to proceed in addressing these issues. The rest of EPA's comments on the sampling plan and QAPP will be forwarded in the near future, depending on how the issues at hand are resolved. Do not misconstrue this letter to represent all of EPA's comments on the subject plans.

I look forward to receiving your response.

Sincerely,

Therese Gioia

Therese Gioia

Enclosures

cc w/out enlosures:

D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
MAY 21 1986
California Department of Health Services
LOS ANGELES

15 MAY 1986

Edward Nemecek
Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa, Suite 300
La Jolla, California 92037

Re: Montrose site in Los Angeles, near Torrance

Dear Mr. Nemecek:

I am writing to confirm our conversation of May 14, 1986. We discussed how the schedule in the Consent Order is affected by the access problem with Farmers Brothers. We agreed that Montrose will continue its efforts to obtain access to the Farmers Brothers property in order that the remaining near-site soil borings can be drilled and sampled. In order to maintain the schedules outlined in the Consent Order, we agreed for purposes of computing the deadlines for data submission, to consider Round 1 of the Offsite Soil, Sediment, and Surface Water Sampling complete on May 16, 1986, even though the soil samples have not yet been collected from the Farmers Brothers property. Therefore, we have agreed that the near-site soil boring and sampling accomplished prior to May 16, 1986 is considered a complete round of sampling for scheduling purposes and all schedules in the Consent Order regarding events to occur upon completion of a sampling round are applicable as of May 16, 1986. The soil borings to be sampled on the Farmers Brothers property will be considered a separate sampling round, but are still within the scope of the Consent Order. EPA fully expects Montrose to secure access and complete this task no later than May 30, 1986.

We also agreed that the sediment and surface water sampling round could begin on May 15, 1986, if Ecology & Environment are prepared to take split samples at that time. I informed Alan Chartrand, of the Regional Water Quality Control Board, of this schedule and asked him to contact Roger Niemeyer to make arrangements for observing the sampling or taking split samples.

Please advise me of progress regarding agreement with Farmers Brothers. If you have any questions regarding these agreements for the Consent Order schedules, please call me immediately.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

cc: D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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San Francisco, Ca. 94105

COMMUNITY MEETING

MONTROSE HAZARDOUS WASTE SITE
MAY 13, 1986

AGENDA

• INTRODUCTION	Tim Vendlinski (Facilitator) Community Relations Coordinator U.S. Environmental Protection Agency (EPA)	7:00 p.m.
• HISTORY OF EPA INVOLVEMENT AT THE MONTROSE SITE	Alexis Strauss Chief Enforcement Response Section EPA	7:05 p.m.
• EPA INVESTIGATION OF THE MONTROSE SITE	Therese Gioia Remedial Project Manager Enforcement Response Section EPA	7:15 p.m.
• BREAK	.........(Optional).........	7:30 p.m.
• QUESTION & ANSWER SESSION WITH PANEL:		7:40 p.m.

Alexis Strauss

Therese Gioia

Hank Yacoub
Supervising Water Resources Control Engineer
California Regional Water Quality Control Board (RWQCB)

Nestor Acedera
Chief, Assessment & Mitigation Unit
Toxic Substances Control Division
California Department of Health Services (DHS)

Marianne Strickfaden
Metcalf & Eddy (Consultants for EPA)

* * * * Please complete your meeting evaluation form. Thank you! * * * *

* * * MEETING EVALUATION * * *

COMMUNITY MEETING
MONTROSE HAZARDOUS WASTE SITE
MAY 13, 1986

Please take a minute to complete this evaluation of tonight's meeting and leave it at the registration desk as you depart. Your comments will help us shape future meetings and improve our service to the community.

1. How did you learn about this meeting?

   radio .... _____
   EPA fact sheet .... _____
   newspaper article .... _____
   community group .... _____
   a friend .... _____
   television .... _____
   other .... __________________________

2. On a scale of 1 to 5 (1 being NO! and 5 being YES!), rate the following items by circling the appropriate number and add your comments:

	NO!				YES!
a. Did you find the presentations informative? What would make them better?	1	2	3	4	5
b. Did our use of graphics enhance your understanding of the Superfund process and site contamination? How could the graphics be improved?	1	2	3	4	5
c. Did the question & answer session meet your needs? How can we better communicate with you?	1	2	3	4	5
d. Do you like this meeting location? Where and when should the next meeting be held?	1	2	3	4	5

3. Have you ever used EPA's Toll-free Information Service at (800) 231-3075? If so, was the service useful?

4. Are there any outstanding questions or issues you would like addressed in the next fact sheet or community meeting?

T T John Sc

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

EPA Environmental News

MONTROSE CHEMICAL CORPORATION SITE

PART I REMEDIAL INVESTIGATION RESULTS AVAILABLE

MAY 1986

The Montrose Chemical Corporation manufactured DDT at its 13-acre facility in Los Angeles from 1947 to 1982. Hazardous waste contamination has been found on and off-site and, in October 1984, EPA proposed the site for inclusion on the federal National Priorities List (NPL) for hazardous waste sites. The Montrose site is located on Normandie Avenue approximately one-quarter mile from the Del Amo State Superfund site (See Figure 1).

To determine the extent of contamination, the Environmental Protection Agency (EPA) designed a two-part Remedial Investigation. In July 1985, EPA completed field sampling in Part I of the Remedial Investigation by testing soil, surface water, and ground water for contamination by DDT, its byproducts, and a host of other organic chemical wastes. The Part I Remedial Investigation Report that describes the sampling program and presents the sampling results is now available for public review and comment at local information repositories listed on page 5. EPA used the Part I Remedial Investigation results (Tables 1 and 2) to identify nine Target Chemicals that will be the focus of the Part II Remedial Investigation.

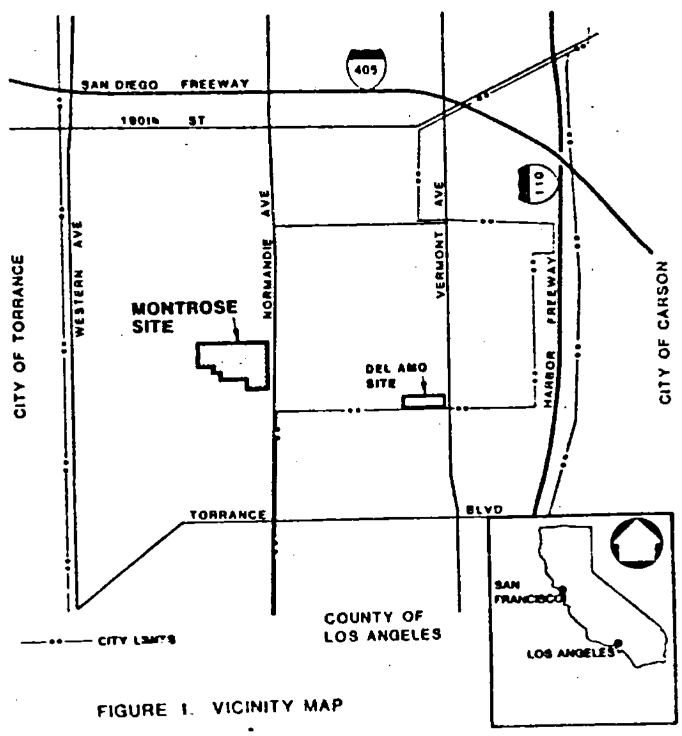

FIGURE 1. VICINITY MAP

COMMUNITY MEETING

A community meeting will be held Tuesday, MAY 13, 1986, from 7 p.m. to 9 p.m. in the Carson Public Library Multi-Purpose Room at 151 East Carson Street in the City of Carson. At the meeting, we will discuss sampling results, explain future site activities, hear your concerns, and answer your questions.

SUMMARY OF PART I REMEDIAL INVESTIGATION RESULTS

EPA collected soil and ground water samples from 17 boreholes, 5 on-site groundwater monitoring wells, and 2 off-site wells during June-August 1985. Results confirm that shallow soils contain very high concentrations of DDT, DDD, and DDE, (up to 10% of the soil material) as well as lesser concentrations of chlorobenzene (MCB), benzene, dichlorobenzene, chloroform, and acetone. High concentrations of contaminants were also found in deeper soils at two locations within 100 feet of the former surface impoundment. Ranges of soil contamination are presented in Table 1.

Results indicate that groundwater in the Bellflower Aquitard is contaminated at levels above state and federal drinking water standards. However, the Aquitard is not used for public water supply. Contaminants of concern in the Aquitard include those chemicals listed in Table 1. The Aquitard is a natural underground formation that retards the movement of groundwater (See Figure 2). Groundwater samples from two off-site wells, believed to be in the Gage aquifer, do not show elevated levels of these contaminants.

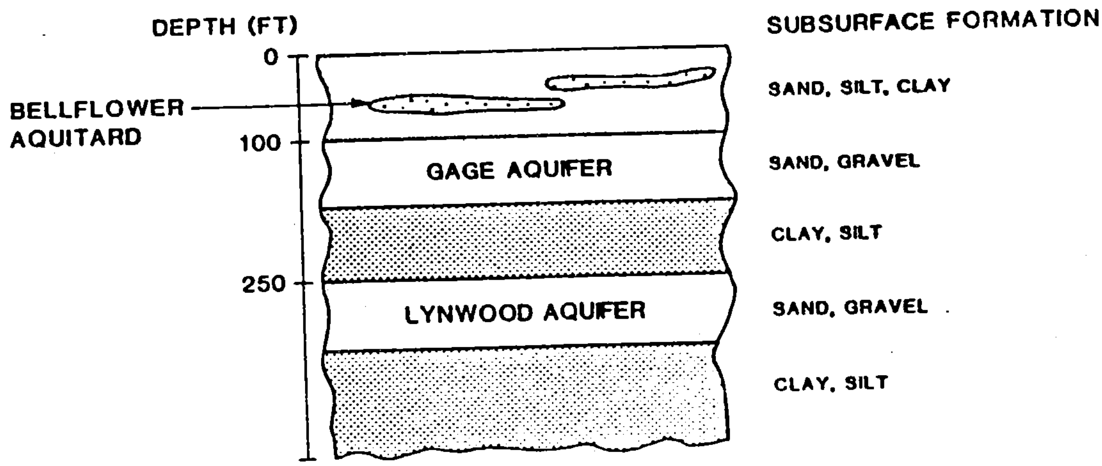

FIGURE 2. GENERALIZED SITE CROSS SECTION

Groundwater results are summarized in Table 2. The source of contamination include the former surface impoundment, historical manufacturing and process areas, and surface soils concentrated beneath the present building pads.

TABLE 1. RANGES OF CHEMICAL CONCENTRATIONS IN SOIL SAMPLES COLLECTED ONSITE[a]

Concentrations in micrograms per kilogram (or parts per billion)

	Sample depth	
Chemical compound	0-6 ft	6-19.5 ft
DDT (all isomers)	16-7,600,000	ND-11,000,000
DDT (all isomers)	<40-460,000	ND-190,000
DDT (all isomers)	16-720,000	ND-2,200,000
Chlorobenzene	6-29,000	ND-16,000,000
Benzene	ND	ND-5
Dichlorobenzene	ND-25,000	ND-500,000
Chloroform	ND-680	ND-72,000
Acetone	ND-5,900	ND-57,000
BHC (all isomers)	ND-27,000	ND-42,000

a. Samples collected and analyzed by EPA (June-August 1985)

ND = Not detected.

TABLE 2. SUMMARY OF CHEMICAL CONCENTRATIONS IN GROUND WATER SAMPLES COLLECTED ONSITE[a]

Concentrations in micrograms per liter (or parts per billion)

Monitoring well	DDT	DDT	DDE	Chloro-benzene	Acetone	Chloro-form	Total dichloro-benzene	Benzene	BHC
MW-1	10	10	10	110,000	5,800	22,000	180J	1,700	178
MW-2	4,500	410	65J	310,000	14,000	5,900	736	ND	330
MW-3	3	0.38	0.1	25	150J	750	60	80	1.54
MW-4	1.1	0.15J	1	100	60J	4,400	60	ND	2
MW-5	20	10	10	2,500	5,100	2,500	123J	5,000	135
OW-1	0.1	0.1	0.1	5	10J	5	5	ND	0.5
OW-2	0.1	0.1	0.1	5	450	4J	5	ND	0.5

a. EPA, Remedial Investigation Report, February 1986.

ND = Not detected.

J = The usefulness of this data is limited because concentrations may not be accurate.

PLANNED ACTION

During the Part II Remedial Investigation, Montrose will conduct additional on-site and off-site sampling activities with EPA oversight, as described below.

Off-site Sampling

EPA has approved the Off-site Sampling Plan submitted by Montrose. Off-site soil, sediment, and surface water sampling will begin the week of April 28, 1986 and will last from 3 to 5 weeks

To ensure the quality of Montrose's off-site sampling effort, EPA developed an Off-site Split Sampling Plan to define how split samples will be collected for analytical comparison. A split sample is a sample of soil, water, or ground water that EPA takes from the same location and at the same time that Montrose collects its samples. The split samples are analyzed by a different laboratory and results are compared to those submitted by Montrose. Moreover, EPA will conduct a Quality Assurance/Quality Control check of all Montrose sampling results.

If at any time EPA is not satisfied with Montrose's work, we will either have Montrose take corrective actions or conduct the field work with EPA contractors.

On-site Sampling

EPA will soon finish the RI/FS Work Plan, Hydrogeologic Investigation Revision, which describes how the Part II on-site investigation will be implemented. The on-site investigation will include installing and sampling monitoring wells in the Bellflower Aquitard and Gage Aquifer, and taking deep soil borings in the vicinity of the former surface impoundment.

Community Cooperation Needed for Additional Off-site Sampling

EPA has sampling results that indicate airborne DDT dust from the Montrose site was released to the surrounding community and may continue to persist there. In order to fully document the historic air releases from the Montrose site, EPA is proposing additional off-site sampling. With the cooperation of residents and local business persons, EPA would like to collect soil samples from yards and business frontages and dust samples from household and business attics. Within the next month, EPA will contact property owners to explain the sampling program and request permission to sample on private property. If EPA calls upon you to participate in the sampling program, we would greatly appreciate your cooperation.

INFORMATION REPOSITORIES

Following the December 1985, informal public review period, EPA approved the Off-site Sampling and Quality Assurance Plans. These final plans along with the Off-site Split Sampling Plan are available at the information repositories for your information. The Part I Remedial Investigation report is also available for your review at the following locations:

Carson Public Library
Attn: Orelda F. McGee
151 East Carson Street
Carson, CA 90745
(213) 830-0901

Civic Center Library
Attn: Judy Harrington
3301 Torrance Boulevard
Torrence, CA 90503
(213) 618-5959

WOULD YOU LIKE MORE INFORMATION?

If you have any questions or comments regarding the Montrose hazardous waste site you may wish to contact:

Timothy Vendlinski
Community Relations Coordinator
Toxics and Waste Management Division
U.S. EPA
215 Fremont Street (T-1-3)
San Francisco, CA 94105
(415) 974-0255

Nancy Alvarado-Blauer
Coordinator
Toll-free Information Service
(800) 231-3075

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
MAY 01 1986
California Department of Health Services
LOS ANGELES

2 9 APR 1986

Edward Nemecek
Montrose Project Coordinator
Hargis & Associates, Inc.
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Montrose site in Los Angeles, near Torrance

Dear Mr. Nemecek:

Enclosed please find a copy of EPA's Draft Preliminary Part 1 Remedial Investigation Report for your review and comment. This report has also been distributed to the public and various federal, state, and local agencies. Please provide any comments you may have on the report to me by May 16, 1986. For your information, EPA is sponsoring a community meeting on May 13, 1986 at the Carson Public Library from 7 - 9 p.m. to discuss the report with interested community members.

If you have any questions, feel free to call me at (415) 974-7465.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

enclosure

cc: K. Lytz, Latham & Watkins, w/enclosure
D. M. Greeno, Montrose, w/enclosure
R. Ghirelli, RWQCB, w/out enclosure
N. Acedera, DOHS, w/out enclosure

John Sc

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

2 8 APR 1986

APR 30 1986
California Department of Health Services
LOS ANGELES

Nestor Acedera
Toxic Substances Control Division
CA Department of Health Services
107 South Broadway, Rm. 7011
Los Angeles, California 90012

Re: Montrose site in Los Angeles, near Torrance

Dear Mr. Acedera:

Enclosed please find a copy of EPA's Draft Preliminary Part 1 Remedial Investigation Report for your review and comment. The report discusses the Part 1 Remedial Investigation - On-site Soils and Groundwater study conducted by EPA at the Montrose site. Please forward any comments you may have on the report to me by May 16, 1986. For your information, EPA is sponsoring a community meeting on May 13, 1986 at the Carson Public Library from 7 - 9 p.m. to discuss the report with interested community members. Your attendance is also welcome.

In addition, EPA approved the Part 2 Remedial Investigation - Off-site Soils, Sediment, and Surface Water Sampling Plan and Quality Assurance Project Plan prepared by Montrose. Montrose began conducting the field work April 28, 1986; the sampling effort is expected to last from 3 - 5 weeks. EPA contractors are collecting split samples and overseeing Montrose's sampling procedures.

If you have any questions, please feel free to call me at (415) 974-7465.

Sincerely,

Therese Gioia

Therese Gioia
Remedial Project Manager
(T-4-2)

enclosure

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

April 23, 1986

Ms. Therese B. Gioia
Environmental Protection Specialist
EPA (T42)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

Re: Off-Site Sampling; Montrose Site

Dear Ms. Gioia:

We have not obtained written permission to enter the Farmers Brothers Coffee Company Property. Hargis + Associates will require specific written permission from Farmers Brothers to conduct the EPA required work on their property. While extensive efforts have been made to acquire the written permission, we seem to be at an impasse. Please advise us as to what further steps may be appropriate.

Also, as we discussed via telephone on April 23, there are several major buried pipelines containing hazardous and/or explosive materials in the easements south and east of the Montrose site. Some of these pipelines are buried less deeply than the proposed soil boring depths. We are currently researching the problem further, but at this time it appears that alternative sampling procedures may be necessary. I will keep you advised as to our progress in this matter.

If you have any questions please do not hesitate to contact me.

Sincerely,
HARGIS + ASSOCIATES, INC.

E. G. Nemecek (jk)

Edward A. Nemecek
Senior Associate

cc: Robert Ghirelli
cc: Angelo Bellomo
cc: Dan Greeno
cc: Karl Lytz

EAN/jk

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

APR 25 86

April 23, 1986

Ms. Therese B. Gioia
Environmental Protection Specialist
EPA (T42)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

Re: Revised On-Site Sampling Plan; Revised QAPP;
Montrose Site; Torrance, California

Dear Ms. Gioia:

Enclosed please find three copies of the revised reports:

QUALITY ASSURANCE PROJECT PLAN

ON-SITE GROUNDWATER AND SOILS SAMPLING PLAN
MONTROSE SITE
TORRANCE, CALIFORNIA

PART 2
REMEDIAL INVESTIGATIVE WORK
ON-SITE GROUNDWATER AND SOILS INVESTIGATION PHASE I
MONTROSE SITE
TORRANCE, CALIFORNIA

We have made every effort to address each of the comments contained in your letter of March 28, 1986. On the major issues contained in your comments, we have accepted EPA's proposals for the deep soils borings array, and reached a suitable compromise acceptable to EPA on drilling techniques. With regard to installation of permanent submersible pumps, you'll note the original plan allowed for discretion in installation of permanent pumps in the Bellflower wells, depending on the productivity of the wells, and that we recommended that permanent pumps be installed in the Gage wells. As no evidence has been presented regarding the non-suitability of permanent pump installation, the revised plans have not been changed with regard to that issue.

Regarding the proposal to use PVC casing to construct the wells, we have not revised the plan in that area either. Again, no evidence has been presented to indicate that this type of material poses a problem, either generally, or site-specifically at the Montrose site.

We look forward to your review of the revised plans. Please contact me if you have any questions.

Sincerely,
HARGIS + ASSOCIATES, INC.

E. A. Nemecek JK

Edward A. Nemecek
Senior Associate

cc: Robert Ghirelli
cc: Angelo Bellomo
cc: Dan Greeno
cc: Karl Lytz

EAN/jk

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

COPY

April 8, 1986

Ms. Therese Gioia
Project Coordinator
USEPA - Region IX
215 Fremont Street
San Francisco, California 94105

RE: Commencement of Montrose Off-Site Sampling

Dear Ms. Gioia:

As a result of your approval of the Montrose off-site sampling plan and associated QAPP, and per the terms of the consent order, this is notification that Montrose presently intends to commence the work on April 28, 1986. Some minor details remain to be taken care of such as equipment procurement, final selection of a drilling contractor, and a remaining access problem with Farmer's Brothers Coffee.

I will remain in close telephone contact with you through the coming weeks to insure a successful start of the sampling.

Should you have any questions, please feel free to contact me.

Sincerely,
HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

EAN/lad
CC: Dan Greeno
Karl Lytz, Esq.
R. Ghirelli
N. Acedera

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

28 MAR 1986

APR 07 1986

Edward Nemecek
Project Coordinator
Hargis & Associates
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Dear Mr. Nemecek:

I have received your letter amending the Off-site Soils, Sediment, and Surface Water Sampling Plan and Quality Assurance Project Plan (QAPP). All comments have been addressed and the Sampling Plan is hereby approved for implementation. The QAPP is conditionally approved, the EPA QA Officer must review the letter amending the plan and sign the document. Completed signature pages will be forwarded to you shortly. The signature page of the QAPP should be executed before field work begins. Please notify me as soon as possible of the schedule for the field work, so that arrangements for oversight and collection of the EPA split samples can be finalized. For your information, I will be out of the office until April 7, 1986, please contact Alexis Strauss (415-974-8915) in my absence.

I am pleased that the project is moving forward and field work will begin soon. I look forward to receiving the results of the effort.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

cc: D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

HARGIS + ASSOCIATES, INC.
Consultants in Hydrogeology

2223 Avenida De La Playa Suite 300
La Jolla, California 92037
(619) 454-0165

March 27, 1986

Hazardous Materials Management Section
MAR 28 1986
California Department of Health Services
Los Angeles

Therese B. Gioia
Environmental Protection Specialist
EPA (T 4 2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Gioia:

Pursuant to your letter dated March 20, 1986, the following amendments have been made to the Montrose Off-Site Sampling Plan and QAPP. The QAPP you requested signatures on was not enclosed with your letter.

SAMPLING PLAN AMENDMENTS

1. All sampling devices that are to be reused for Montrose off-site work will be decontaminated following the procedure described in the QAPP. Any general decontamination procedures described in the Sampling Plan that are inconsistent with the procedure described in the QAPP are superceded by the QAPP procedure.

2. Total BHC was inadvertently left out of Table 4. All sediment samples will be analyzed for total BHC.

3. Surface water samples to be filtered in the laboratory will be collected primarily during wet weather collection rounds since suspended sediment loads will likely be greatest during runoff events. Samples to be filtered will be collected at SW-1 through SW-3 for three sampling rounds, at SW-4 and SW-8 for two sampling rounds, and at two locations in Consolidated Slip during one sampling round. This protocol emphasizes the sampling locations closest to the site but also allows for the collection of at least two samples from each surface water sampling area.

QAPP AMENDMENTS

1. Surface water samples collected at Torrance Lateral, Dominguez Channel, and Consolidated Slip will be composited in the laboratory instead of the field to minimize volatile loss. The laboratory will composite the sub-samples by taking an aliquot of water from each VOA vial with one syringe for injection into the purging column.

We await final approval of the Sampling Plan and QAPP. I am presently reviewing staffing requirements with the goal of beginning off-site work as early as possible. It would be helpful if you could verbally notify me of when we are likely to receive formal permission to proceed.

If you have any questions or wish to discuss these amendments please call me.

Sincerely,

HARGIS + ASSOCIATES, INC.

Edward A. Nemecek
Senior Associate

cc: D. Greeno
K. Lytz
R. Ghirelli
A. Bellomo

004/ammend.218

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Management Section
MAR 24 1986
California Department of Health Services
LOS ANGELES

20 MAR 1986

Edward Nemecek
Project Coordinator
Hargis & Associates
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Dear Mr. Nemecek:

We are in receipt of the final Montrose Off-Site Sampling Plan and Quality Assurance Project Plan (QAPP). Both plans were much improved and address all of EPA's previous comments. Except for a few items, the plans are acceptable to EPA. We appreciate your efforts in reorganizing the QAPP and meeting the deadline of March 10.

The outstanding items for both the Sampling Plan and QAPP can be addressed with a letter amending the plans. The items which should be addressed are as follows:

Sampling Plan

1) The decontamination procedure described in the Sampling Plan is not consistent with the procedure described in the QAPP. Include a paragraph in your letter to reflect that the decontamination procedure described in the QAPP will be used consistently.

2) Table 4 of the Sampling Plan does not include total BHC as an analyte for sediment sample analysis. Amend the plan with a statement that sediment sample analyses will include total BHC.

3) Include a description of which surface water samples will be included in the 25% filtered analysis. Each discrete surface sampling area (from the site to and including Consolidated Slip) should be represented. Explain why the majority of the filtered samples will be from wet weather collection events.

QAPP

1) Field compositing of surface water samples for volatile analysis is not acceptable. Revise the surface water compositing scheme for volatile organics to relect the following:

a. A full 40 ml vial of sample will be collected from each sub-sample point, e.g. tnere will be 6 full 40 ml VOA vials which comprise the sample for the SW-8.

b. The laboratory may composite the sub-samples by combining the contents of each sub-sample vial in a round bottom flask which is in an ice bath (see attached method) and use that composite sample for analysis, or laboratory may composite the sub-samples by taking an aliquot of water from each sub-sample vial with one syringe, for injection into the GC.

I have enclosed a copy of the QAPP for signature/approval by the appropriate individuals. Please return the signed copy with the letter amending the plans. Once the amendments have a been reviewed and approved, EPA will also sign the signature/ approval page. A copy of the fully executed signature/ approval page will be returned to you for your records.

I will notify you in writing when the Sampling Plan and QAPP are approved. Inasmuch as both Montrose and EPA are interested in expediting the sampling efforts, I suggest we work toward initiating the field work as soon as possible. If you are able to expedite your schedule and arrange for the field work to commence before the 20-day mandatory notification period outlined in Article VIII of the Consent Order, EPA will waive the notice requirement, provided, however, we have been able to schedule our laboratory and contractor. Of course this would mean that Montrose must also be willing to waive the 20- to 45-day field work commencement and implementation deadline outlined in Appendix A to the Consent Order. I have already initiated efforts to schedule a laboratory and contractor; final arrangements are pending the final sampling schedule.

I look forward to receiving the amendments to the Off-site Plans. If you have any questions, please feel free to call me.

Sincerely,

for Therese Gioia
EPA Project Coordinator

attachment

cc w/out attachment:

D.M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

—B1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

6 MAR 1986

Hazardous Materials Management Section
MAR 10 1986

Ralph S. Tufenkian
Vice President, Corporate Projects
Western Waste industries
Corporate Offices, Suite 235
1025 W. 190th Street,
Gardena, California 90248

Dear Mr. Tufenkian:

I am in receipt of your February 27, 1986 letter requesting plans and notices regarding EPA activities at the Montrose site. I appreciate your concern and interest in this matter. Due to the many community members and businesses interested in our activities, EPA is not able to provide each individual or business with copies of all the plans and reports developed for the Montrose site. However, we have developed a community mailing list for notifying individuals of upcoming activities, plans, and reports, and we have set up information repositories at local libraries where plans and reports are available for review. In addition to notifications, we send out periodic updates of our activities at the site.

Your name has been added to the community mailing list so that you will receive all subsequent notifications and updates for the Montrose site. I have enclosed copies of the previous updates and notifications, which contain information on the plans and reports presently available and addresses of the information repositories. If you have any questions, please call me (415-974-7465) or Tim Vendlinski (415-974-0255), the EPA Community Relations Coordinator.

Sincerely,

Therese Gioia

Therese Gioia
Remedial Project Manager
(T-4-2)

enclosures

cc w/out enclosures:

Tim Vendlinski, EPA
N. Acedera, DOHS

BOE-C6-0178232

John

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

2 8 MAR 1986

APR 02 1986

Edward Nemecek
Project Coordinator
Hargis & Associates
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: EPA Comments on Part 2 On-site Groundwater & Soils Plans, Phase I

Dear Mr. Nemecek:

Enclosed please find the EPA comments on the Draft Montrose Part 2 On-site Groundwater and Soils Phase I Sampling Plan and Quality Assurance Project Plan (QAPP). Although some portions of the plans are acceptable, we have extensive comments on the well construction details and well drilling method. We should schedule a technical meeting to discuss these comments as soon as you have reviewed them.

If you have any questions, please feel free to call me at (415) 974-7465. For your information, I will be out of the office until April 7, 1986. Should you need to discuss anything before then, contact Alexis Strauss at (415) 974-8915.

Sincerely,

Therese Gioia

Therese Gioia
EPA Project Coordinator

enclosure

cc w/enclosure:

D. M. Greeno, Montrose
K. Lytz, Latham & Watkins
R. Ghirelli, RWQCB
N. Acedera, DOHS

ON-SITE GROUNDWATER & SOILS SAMPLING PLAN COMMENTS

1. Cover: This investigation is considered to be Part 2 On-site Groundwater and Soils Investigation Phase I.

2. Page 2, ¶ 4: The full name of EPA's contractor is Metcalf & Eddy, Inc.

3. Page 3, top: Copies of the data from EPA's Part 1 RI investigation were forwarded to Hargis & Associates.

4. Page 3, last ¶: The Bellflower Aquitard on Jones Chemical Company's log appears to be approximately 40 feet thick.

5. Page 4, ¶ 2: The Lynwood Aquifer is overlain by a clay aquiclude not an aquitard.

6. Page 5, top: USGS bulletins describe vertical movement of water between the Bellflower Aquitard and Gage Aquifer during periods of overpumping. If Montrose doesn't know if the aquifers are hydraulically connected then the sentence should state this.

7. Page 7, ¶ 1: What is the holding time for extracts of volatile organic samples?

8. Page 8-12: In order not to be repetitive, all comments on the exploration borehole installation, well installation and construction, and logging procedures have been addressed in the QAPP comments. Any revision to the procedures should be included in the Sampling Plan.

9. Page 8: How will the rate of groundwater movement be determined? Groundwater flow rates are necessary to assess the extent of contamination and rate of chemical movement.

10. Page 9, ¶ 1: Bellflower Aquitard well locations should be shifted: BF-1 should be located in quadrant 23D (see attachment 1) to provide a data point between MW-3 and MW-2; BF-2 should be located in quadrant 13C in order to provide more information concerning the contaminant gradient, it could still be used as an up-gradient control well; BF-3 should be located in quadrant 25B to provide a data point between wells MW-2 and MW-5 and to characterize the east portion of the site; and BF-4 should be placed in quadrant 35B to provide a data point between MW-1 and MW-2.

11. Page 10, ¶ 1: PVC is not an acceptable type of casing material when the contaminants of concern are organics. Bleeding of materials from the PVC as well as adsorption poses a significant potential for affecting the quality of samples. In addition,

considering the problems encountered with the PVC bailer in the previous sampling effort of the on-site wells, PVC is not a material compatible to the types and concentrations of contaminants found in the Bellflower Aquitard. Teflon is the recommended casing material.

12. Page 10, ¶ 1: What is the rationale for using 30 feet of well screen?

13. Page 10, ¶ 2: How will discharge rates be estimated? Under what circumstances will it not be possible to measure groundwater recovery rates?

14. Page 10, ¶ 3: The use of pumps in collecting samples from shallow monitoring wells is not encouraged as the pump becomes a potential source for loss of volatiles. Hand bailing is recommended. Use of a pump to purge the wells for sampling is acceptable. What type of bailer will be used? Teflon should be used, because past experience demonstrates that PVC is not suitable.

15. Page 10, ¶ 4: Describe the sounding tubes and how they are installed and utilized.

16. Page 11, ¶ 2: PVC is not an acceptable casing material. See comment #11 and 14.

17. Page 12, ¶ 1: See comment #13.

18. Page 12, ¶ 2: Give the specifications for the submersible pumps to be installed in the Gage wells, including capacity, type, construction materials and how the use of the pump will not interfere with integrity of the samples.

19. Page 12, ¶ 3: Explain "sounder tubes", see comment #15.

20. Page 12, last ¶: Describe what will be done with the drill cuttings and fluids if they are determined to be hazardous or reference the section of this plan or QAPP that explains the procedure for disposal of hazardous wastes.

21. Page 13, ¶ 1: Five well volumes is the maximum, three well volumes is the minimum (or evacuation until the well is dry). At least three volumes must be evacuated regardless of the method used.

22. Page 13, Sample procedure #2: Revise procedure to reflect the purging of 3-5 volumes is required. Describe the criteria for determining when the field parameters in #2 have stabilized.

23. Page 13, Sample procedure #3: Reference the document (section and page) where "appropriate sample containers" are discussed. Rinsing the sample container is not appropriate for pesticide analysis.

24. Page 13, Sample procedure #4: Field notes should be signed and dated by field observer. Observations should include well/sampling location, sample numbers, time of sample collection, preservatives used, weather, etc.

25. Page 14, ¶ 1: The sections and pages of the QAPP which contain further details on the groundwater sampling procedures should be referenced.

26. Page 14, ¶ 3: How frequently will water levels in the wells be measured?

27. Page 14, ¶ 4: What is the sample container preparation procedure? Field measurements should not be conducted on the samples for analysis, instead a separate aliquot from the same batch of sample water should be used.

28. Page 15, ¶ 1: Describe sample container preparation procedure.

29. Page 15, ¶ 2: It is not correct to rinse the pesticide sample containers with sample water prior to collection, check the method. DDT is not the only pesticide included in the Target Chemicals.

30. Page 15, ¶ 3: Will Montrose supply sample containers for the split samples to EPA?

31. Page 16, ¶ 1: The array presented here was one of a number of options discussed between EPA and Montrose. We finally settled on a maximum number of lineal feet (240) and a maximum number of samples collected (48) and analyzed (24). The details of individual boring depth and location were to be presented in the Sampling Plan with accompanying rationale.

32. Page 16, ¶ 2: What is the rationale for the radii distances? EPA is concerned that the distances between borings are too great to determine the shape of the contaminated zone and recommends that the distances be reduced to 20-foot intervals from the center of the former surface impoundment. EPA is also concerned that the depths of the outer borings may be too shallow and miss contamination potentially located at depth. We suggest that the number of borings be decreased and the depth of each increased. The exact boring configuration and depths can be discussed at the technical meeting. In addition, samples need only be taken from 20 feet to the bottom of the boring.

33. Page 16, ¶ 3: Address what the holding times for the extracts of the remaining samples are, and how additional analysis of these extracts will be accomplished within the holding times.

34. Page 16, ¶ 4: The QAPP section and page number should be referenced.

35. Page 17, top: How will the split-spoon sampling devices and bucket auger rig be decontaminated between borings? OVA measurements should only be conducted on top or bottom sleeves, not on the sleeve being analyzed.

36. Page 17, ¶ 2: Whenever the QAPP is referenced, the section and page number should be included. Soil sample description should include color, texture, composition, saturation, odor, etc.

37. Page 17, ¶ 3: Give section and page when referencing QAPP. The logging procedure in the QAPP refers mainly to the rotary mud drilling method proposed for the well boreholes. Include a section on how the bucket auger soil borings will be logged. Define what the qualifications are for the "qualified geologist."

38. Page 17, bottom: Drill cuttings should not be replaced into the boring. Since the asphalt cap is considered to be temporary, EPA is concerned that the filled soil borings may become a conduit for infiltration and subsequent movement of contaminants. The soil borings should be cemented to the ground surface as are the exploratory borings.

39. Page 18, top: How will drill cuttings be containerized? An open top dumpster is not acceptable? Explain what will happen if cuttings are determined to be hazardous or reference document (section and page) where this is discussed.

40. Page 18, ¶ 1: Split samples will be provided to EPA in the field. EPA should be provided with the same sleeve (bottom preferred) consistently. EPA will address how its split samples will be handled, preserved, and stored.

41. Page 19, ¶ 3: The pH meter should be recalibrated prior to each measurement. EPA recommends that the steel tape be rinsed with solvent and then deionized water between wells.

42. Page 20, ¶ 1: Include section and page when referencing the QAPP. It is not acceptable to reference "standard and accepted method" described in other documents, without including copies of the appropriate sections, or describing the method fully in either the Sampling Plan or QAPP.

44. Page 20, ¶ 2: According to the QAPP, page 25, water samples for common ion analysis will be chilled to 4° C.

45. Page 20, ¶ 3: Each shipping container which has volatile organic samples must also contain a blank sample of certified organic-free water.

46. Page 20, ¶ 4: Duplicate samples for anion/cation analysis should also be included.

47. Page 21, ¶ 3: EPA recommends that each sample container have a chain-of-custody seal. Specify which laboratory will be used.

48. Appendix, General: EPA strongly recommends the use of the "buddy system" for field work at hazardous waste sites.

49. Page A-10, Visual: Hard hats with full-face shield may be more appropriate than goggles.

50. Page A-11, ¶ 3: Drill rigs and augers should be steamed cleaned before initial use, between each hole, and after field operations.

51. Page A-11 - A-13: Reference to the the procedures for handling the hazardous wastes generated by this investigation should be referenced in both Sampling Plan and QAPP, where appropriate.

ON-SITE GROUNDWATER AND SOILS QUALITY ASSURANCE PROJECT PLAN (QAPP) COMMENTS

1. Signature Page: Include the names of responsible individuals.

2. Page 4, ¶ 2: Results of the on-site soils and groundwater investigation were made available to Hargis & Associates.

3. Page 4, ¶ 3: Reference to target chemicals in Sampling Plan is incorrect. Reference can be deleted.

4. Page 4, ¶ 4: Metcalf & Eddy, Inc. will not provide oversight personnel for EPA, instead Ecology & Environment will be EPA's field oversight contractor.

5. Page 5, ¶ 2: Include the all isomers of DDT in the list of Target Chemicals.

6. Page 6, Figure 2: Although figure 2 of the organizational chart indicates that the QA Project Manager is "Responsible for preparation and analysis of the QA audit samples," it is not discussed in the text. This is a desirable audit mechanism and an explanation of this function should be included in the text of this plan. The organizational chart should also indicate the submission and receipt of data from the laboratory.

7. Page 7, ¶ 1: Revise statement on completeness by changing phrase "the number of requested analyses." to "the actual number of analyses performed."

8. Page 7, ¶ 2: What is meant by "reliability" and and how will this be judged in the review of the project documents.

9. Page 9, ¶ 1: Include all isomers of DDT in the list of Target Chemicals. What is the rationale for not including 1,3-dichlorobenzene in the analysis of dichlorobenzene? What is the rationale for the list of common ions choosen for analysis?

10. Page 11, ¶ 2: The detailed well specifications must be submitted as part of this QAPP. What is appropriate safety training?

11. Page 12: Explain the purpose of the concrete utility vault.

12. Page 13: Portable submersible pumps should be used for purging of the wells and then the samples should be collected with teflon bailers. How will discharge rates be estimated?

13. Well Drilling Method

    The rotary mud drilling method is not the preferred method for installing groundwater monitoring wells. Bentonite mud introduced into the hole may contain organic additives which can affect sampling results. Rotary mud is not acceptable because:

1) Drilling fluid and mud mixes with formation fluid and is often difficult to remove completely;

2) The drilling mud (depending on type) may interfere with the parameters to be analyzed;

3) No information on the positon of the water table, and only limited information on water-producing zones is directly available during drilling. Electric logging of rotary drilled wells must be performed to add to the accuracy of the driller's log and to water-related information;

4) Use of this method circulates contaminants;

5) Money potentially saved with this inexpensive method would probably be spent disposing of contaminated drilling muds and fluid in a Class I Disposal Facility.

Air rotary (or air drilling with casing hammer) or hollow-stem, continuous-flight auger are the preferred methods for installing groundwater quality monitoring wells. The technical reasons for not using hollow-stem, continuous-flight augering presented by Hargis & Associates are not substantiated by local drillers in the area. Pioneer Drilling and Cal Testing (Datum) Drilling were contacted and questioned about their experience using the hollow-stem auger method. Both of these companies have extensive experience with drilling by hollow stem augers in the Torrance area. These companies stated that they have not encountered major difficulties when drilling to depths of 200 feet using this method. Pioneer Drilling has been drilling for six months at a location within 1/2-1 mile of the Montrose site using hollow-stem augers.

The gravel or sand pack (screen filter) is installed as the auger flight is removed in phases; this method does not cause the auger flights to be 'locked' by the gravel and allows the auger to act as a casing to prevent caving of the borehole. Placement of the bentonite seal and grouting of the well above the screen can be accomplished by attaching a cement basket above the screen before setting the assembly inside the hollow stem. The problem of smearing the fine grained materials on the borehole wall and plugging the formation has not been experienced. Developing the well should remove the fines in the vicinity of the well screen.

The use of continuous sampling is necessary in at least two well borings below approximately 75 feet as there is no current and reliable geological information available between 75 feet and 140 feet. Continuous sampling is necessary to clearly define the bounds of the Bellflower Aquitard and Gage Aquifer so that cross-contamination from the Bellflower Aquitard to the Gage Aquifer is avoided, and so that the appropriate length of well screen can be determined. Continuous sampling will also provide samples for sieve analysis so that the proper sized filter screen pack and well screen are installed. Continuous sampling in the exploratory boreholes with sieve analysis on the Bellflower Aquitard formation and Gage Aquifer formation would be ideal. EPA is very concerned about cross-contamination that will be caused by drilling exploratory boreholes continuously to 140 feet. EPA will require casing and sealing of the Bellflower Aquitard formation before the boring is extended into the Gage Aquifer.

If the exploratory boreholes are not drilled, then continuous sampling and sieve analysis will be required for at least one Bellflower Aquitard well boring and one Gage Aquifer well boring. If EPA is confident that enough information has been collected from the one Bellflower Aquitard continuous sample, then the remaining four wells can be drilled without continuous sampling (every five feet will be sufficient). If EPA is not confident that one borehole of continuous sampling is sufficient, continuous sampling must be conducted for another Bellflower Aquitard borehole. The same holds true for the Gage Aquifer boreholes.

The air rotary or hollow-stem auger methods must be used in a way that eliminates the possibility of cross-contamination from the Bellflower Aquitard to the Gage Aquifer. The same procedure proposed in the Draft QAPP for the rotary mud method can be applied to either the air rotary or hollow-stem drilling methods.

14. Well Construction

The information collected with continuous sampling will enable the determination of the well specification to be made. The Draft QAPP does not provide enough details on the well specifications and how these specifications are to be determined. Sieve analysis is necessary. The specifications which must be determined are screen slot size, length of screen, perforation intervals, thickness of bentonite seal, size of filter pack, and interval of the water bearing unit to be screened. EPA will require detailed specifications before approving the installation of the wells.

PVC is not an acceptable well casing material because the contaminants of concern are organics and may adsorb to the casing, affecting the analytical results. Teflon is the recommended casing material.

15. Well Development

The QAPP needs to include much more detail on how the wells will be developed. There is more than one method for developing monitoring wells, the method proposed by Montrose must be fully explained. Criteria for considering a well adequately developed must be established and outlined in the QAPP.

16. Page 16, ¶ 1: EPA requires a minimum of 3 well volumes and a maximum of 5 well volumes to be purged before sampling. 3 well volumes must be removed regardless of whether bailing or pumping is employed. It is acceptable to purge the wells by pumping, but the sample must be collected by a teflon bailer.

17. Page 16, A.: The sampling procedures, preservation, packing, and shipping should also be reviewed with field personnel before going into field.

18. Page 17, B, 1st bullet: Describe the procedure for taking OVA measurements. Where will these background measurements be taken?

    3rd bullet: Describe or reference procedures for measuring water levels.

    5th bullet: At least 3 well volumes need to be purged. Define the criteria for considering the parameters to be stabilized.

    7th bullet: How will pump discharge rate be measured?

19. Page 18, ¶ 1: Rinsing of the pesticide sample containers is not acceptable.

20. Page 18, ¶ 3: If bubbles appear in the sample container, is the container emptied and refilled or just topped off?

21. Page 19, 4th bullet: Each shipment container which has volatile samples must have a blank sample of certified organic-free water.

22. Page 19, last bullet: The blank common ion samples will also need to be preserved.

23. <u>Page 19, last ¶</u>: Address the holding time issue for the extracts of the soil samples.

24. <u>Page 20, last bullet</u>: OVA measurements should not be conducted on the sleeve to be submitted for analysis.

25. <u>Page 21, 5th bullet</u>: Other pertinent information which should be recorded is date of sample collection, description of sample such as color, odor, saturation, etc.

26. <u>Page 21, last bullet</u>: EPA recommends that the split-spoon device be steam cleaned or a solvent rinse should be included in decon procedure. Also explain what disposal is appropriate or reference section which does.

27. <u>Page 22, 5.4</u>: The procedures outlined in this document must be used by the investigative team.

28. <u>Page 23, top</u>: Sample containers for pesticide must not be rinsed with sample prior to collection.

29. <u>Page 23, ¶ 2</u>: EPA recommends that each individual sample bottle have a chain-of-custody seal. Each shipping container (case?) which contains volatile organic samples must have a trip blank of certified organic-free water.

30. <u>Page 25, Table 1</u>: Table 1 and the text disagree on the number and/or type of containers to be used for aqueous pesticide and "common ion" analyses. The lack of consistency on the number of containers may be due to a statement on pg. 49 that indicates two (2) containers will be collected for each analyte in case of contamination or breakage. Table 1 should indicate "no headspace" for the carbonate/bicarbonate analysis. Any void space in the container can cause a shift in the carbonate equilibrium. Nitrate/nitrite will be measured is samples are acidified.

31. <u>Page 26, ¶ 2</u>: Explain that EPA will receive the same sleeve (bottom preferred) each time it requests a split sample.

32. <u>Page 26, ¶ 3</u>: Reference the Health & Safety Plan.

33. <u>Page 27, Borehole logging</u>: Borehole logging will be done initially from continuous samples, not drill cuttings. When enough information has been collected from continuous samples, then logging can be done from the drill cuttings. Make note of any staining or odors in the description.

34. <u>Page 28, logging cont.</u>: Include sieve analysis of the water bearing formations. Revise logging procedure to reflect that air rotary or hollow-stem augers will be used. Include blow counts if hollow-stem auger method is used.

35. Page 28, last ¶: There is a discrepancy between the water level measurement accuracy - QAPP says within 0.1 feet and Sampling Plan says within 0.01 feet.

36. Page 29, 2nd bullet: How will pumping wells within 1/2 mile be identified.

37. Page 30, last bullet, mid-page: Rinsing with distilled water may not be sufficient. EPA suggests you use two different sounders and tapes, one set for the Bellflower wells and one set for the Gage wells.

38. Page 31, 2nd bullet: The individual conducting the measurements should sign the field notebook.

39. Page 31, 3rd bullet: What will be done if probes cannot be cleaned?

40. Page 32: Define small and large discharges. How will discharge water be contained?

41. Page 32, only ¶: Describe the in-line flow meter and how it functions.

42. Page 34, ¶ 1: Describe the alternative procedures, for if they are not known, then they cannot be deemed acceptable.

43. Page 35, ¶ 3: Alternative procedures are not acceptable unless they are specified. The procedures in this plan are to be followed, which is why they are written down in a plan.

44. Page 35, bottom: What does collecting only enough sample for good representation have to do with chain-of-custody?

45. Page 37, ¶ 1: Replace "number" in first sentence with "label."

46. Page 39, 1st bullet: The pH meter should be recalibrated after each separate use (between wells).

47. Page 39, 3rd bullet: If the instruments vary by more than 5% how do you know which instrument is wrong? Will both instruments be sent to the manufacturer?

48. Page 40, 9.0: Identify the laboratory, in-house or outside.

49. Page 41, Table 2: Several methods identified in Table 2 are questionable. The EPA method for Carbonate-Bicarbonate is 130.1, sulfate is 375.1, 375.3, or 375.4. The Standard Methods citation for silica (SiO_2) is 425 and the method for silicon (Si) is 303C - which analysis is desired? The "Alpha" citation for boron and silica should be changed to "APHA." This table should be reviewed and corrected.

50. <u>Page 44, 1st bullet</u>: The labeling procedures for the blanks and duplicates are unclear. Page 44 states "The duplicate will not be labelled as such." All samples, including blanks and duplicates should be identified in the same manner so that the laboratory is not aware which samples are blanks and duplicates.

51. <u>Page 45, ¶ 1 & 4</u>: All measurements should be recorded; the reasoning why one is judged to be more accurate should also recorded.

52. <u>Page 45, ¶ 3</u>: The ph and conductivity meters should be recalibrated between each measurement point.

53. <u>Page 48, last ¶</u>: Who conducts the quarterly laboratory audits referenced?

54. <u>Page 51, ¶ 3</u>: Replace the word "requested" with the word "performed" in the first sentence.

55. <u>Page 53, Corrective Action</u>: EPA strongly recommends that resampling and/or reanalysis be included as a potential corrective action.

56. <u>Appendix A, Figure A.1</u>: The person making observations and measurements as well as the date, time and sampling/borehole site should be included. Include penetration rates (blow counts) on log if applicable.

57. <u>Appendix B, B.1</u>: Preprinted sample number should be shown on the label.

58. <u>Appendix B</u>: EPA recommends the use of chain-of-custody seals for each sample container. If used, a sample of the seal should be included in this section.

GEORGE DEUKMEJIAN, *Governor*

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
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Hazardous Materials Management Section
MAR 24 1986
California Department of Health Services
LOS ANGELES

March 20, 1986

D. M. Greeno, General Manager
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TRANSMITTAL OF REVISED CLEAN UP AND ABATEMENT ORDER (No. 86-2)

Attached is a revised Cleanup and Abatement Order (No. 86-2), dated March 20, 1986. Its directives are consistent with those specified in the EPA Administrative Order on Consent (Docket No. 85-04). Compliance with EPA's directives will satisfy the requirements of this Order as well.

If you have further comments on the contents of this Order, please feel free to contact Mr. Hank Yacoub at (213) 620-4697 or Mr. Allan Chartrand at (213) 620-5623.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

ABC:gw

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BOE-C6-0178247

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March 20, 1986

CLEAN UP AND ABATEMENT ORDER NO. 86-2

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Montrose Chemical Corporation of California (Montrose) owned and/or operated a facility at 20201 South Normandie Avenue in Torrance, California, for the manufacture and distribution of dichlorodiphenyl trichloroethane (DDT). The plant operated from 1947 to 1982. Production of DDT has ceased and Montrose dismantled this facility in 1982.

2. The California Department of Health Services approved the RCRA Closure Plans and Procedures submitted by Montrose in August 1982. The Closure Plan addressed only the dismantling and disposal of storage tanks and their contents at BKK, formerly a Class I landfill in West Covina, California. However, the discharge of DDT-contaminated rainfall runoff from the facility was not addressed and remained unabated.

3. The discharge of DDT-contaminated rainfall runoff from the facility and adjacent property, its effects on dominguez channel and Consolidated Slip waters and sediments, is a condition of pollution which probably will not be abated until appropriate remedial measures are taken. In February 1985, Montrose regraded and capped the site. This cap was not approved by EPA or the Regional Board. The extent to which the temporary asphalt capping of the site has prevented contaminated runoff from leaving the site has yet to be determined.

4. Stormwater runoff from the plant property drains through a narrow, unlined channel, to adjacent land where it ponds, and then overflows into a catch basin approximately 500 feet south of the plant. Water from this catch basin flows to the Torrance Lateral, a small flood control channel owned by Los Angeles County Department of Public Works, Flood Control Division (Flood Control Division). Torrance Lateral drains into Dominguez Channel, and ultimately into consolidated Slip of Los Angeles Harbor.

5. Montrose is the only facility which has manufactured DDT in the area tributary to the Torrance Lateral of Dominguez Channel and to Consolidated Slip of Los Angeles Harbor.

6. The Water Quality Control Plan for Los Angeles River Basin specifies that:

   "No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board."

7. The Environmental Protection Agency has established ambient water quality criteria to protect human health and aquatic life, as follows:

   "For DDT and its metabolites the criterion to protect saltwater aquatic life as derived using EPA Guidelines is 0.0010 ug/l (ppb) as a 24 hour average and the concentration should not exceed 0.13 ug/l at any time. The available data for DDT indicate that acute toxicity to saltwater aquatic life occurs at concentrations as low as 14 mg/l.

   "For the maximum protection of human health from the potential carcinogenic effects due to exposure of DDT through ingestion of contaminated water and contaminated aquatic organisms, the ambient water concentration should be zero, based on the non-threshold assumption for this chemical."

   EPA's Ambient Water Quality Criteria document states that for the protection of human health the maximum level of exposure to monochlorobenzene (MCB) should be 488 ppb. MCB is a precursor

9. On November 9 and 10, 1982, EPA staff collected water samples downstream from the facility and collected soil samples form adjacent offsite locations. Water samples showed concentrations of 209 to 306 ppb total DDT leaving the site and 695 ppb in water ponded offsite. Total DDT concentrations in adjacent offsite soils were as high as 1,900 ppm.

10. The California State Mussel Watch is a marine monitoring program conducted by the State Deparment of Fish and Game for the State Water Resources Control Board. The Mussel Watch Program in 1980 revealed elevated levels of DDT in mussels taken from various stations within the Los Angeles/Long Beach Harbors. The following table summarizes total DDT concentrations in mussels taken from Consolidated Slip at the terminus of the Dominguez Channel:

CONSOLIDATED SLIP

January, 1982	2,460	ug/kg (dry weight)
March, 1983	2,231	"
December, 1983	2,016	"
January, 1985	1,017	"

Inasmuch as DDT registration was discontinued by EPA in 1972, it is unlikely that such significant DDT residues could have arisen from any source other than Montrose. This is substantiated by findings made in a september 1985 report issued by the Environmental Hazards Assessments Program of the California Department of Food and Agruculture, which states: "There is no evidence that there has been any illegal use of DDT since its ban (in 1972)".

11. During the course of manufacture, handling and distribution of DDT, residues of this material were deposited on and in the soils at various locations at the Montrose facility and adjacent properties where stormwater could come into contact with these residues and transport them from the site.

12. Process wastes containing high levels of DDT and MCB were directed to a wastewater settling and recycling pond located in the process area.

13. Montrose conducted a soil boring and drilled five monitoring wells on site in April, 1985, in partial compliance with the Remedial Investigation/Feasibility Study (RI/FS) workplan. The results of a recent investigation by Montrose indicate high levels of DDT and MCB in soil below the wastewater pond area.

The Montrose data for soils sampled at 62 feet in depth showed 3,100 ppm MCB and 8,617 ppm total DDT, while those at 77 feet showed 7,400 ppm MCB and 4,978 ppm total DDT. Soil borings taken from a depth of 52 feet from a point adjacent to the wastewater pond exhibited a concentration of 2,900 ppm MCB and 5,019 ppm DDT.

14. In 1983, EPA and the Regional Board issued enforcement orders to Montrose, requiring Montrose to immediately abate surface and sediment runoff from the site, and to conduct on and offsite soil sampling. Results of the soil samples indicated that DDT was present in soils onsite at levels from 1,000 to 95,000 ppm at depths varying from 0-24 inches. Offsite soil DDT concentrations varied from 210 to 1,900 ppm at depths varying from 0-26 inches.

    The results indicate that DDT was transported from the site via surface runoff. However, no data were presented to determine whether DDT had reached the groundwater underlyiung the site.

15. The Montrose site was proposed for inclusion on the National priorities List in October 1984. EPA subsequently developed a RI/FS Work Plan that expanded the earlier study and required the drilling of wells on the property for groundwater sampling. Regional Board staff reviewed the Work Plan and concluded that completion of the tasks contained therein would also satisfy the requirements of this Order.

16. Results from groundwater samples taken by Regional Board staff in July and August 1985, from the Montrose wells indicate that the shallow ground water beneath the site is contaminated with DDT. Elevated DDT levels are evident in MW2, which is adjacent to the former waste pond settling area, as indicated below:

Sample Date	7-02-85	8-13-85	
Well No.	Total DDT (mg/l or ppm)	Total DDT (mg/l or ppm)	MCB (mg/l or ppm)
MW1	0.0237	0.0235	14.000
MW2	60.597	57.997	37.000
MW3	n.a.*	0.0048	0.005
MW4	0.0524	0.0003	0.085
MW5	n.a.*	0.251	107.000

* Not Analyzed

Recent groundwater investigation by both Montrose and EPA revealed high levels of both MCB and DDT, especially at the site of the former wastewater settling and recycling pond (Monitoring Well #2) and at the northwest boundary of the Montrose site (Monitoring Well #5).

The site is located on the coastal plain in a groundwater basin known as the West Coast Basin. The basin consists of a series of zones: The Bellflower aquitard (located from 63 feet to an unknown depth below site) and the Gage aquifer (located from approximately 120 to 180 feet below site) compose the Lakewoood formation. The Lynwood and Silverado aquifers (located approximately from 240 to 700 feet below the site and separated by clay and sandy clay aquitards) comprise the San Pedros Formation. The Bellflower aquitard and Gage aquifer may be hydraulically connected. The Gage, Lynwood, and Silverado aquifers are used for drinking water supply, industrial, and irrigation purposes.

17. The EPA Carcinogen Assessment Group has determined, as a result of evaluating the availble scientific information, that DDT and its two primary metabolites, DDD and DDE, have considerable carcinogenic potential to humans.

18. The presence of DDT and MCB residues in soil and groundwater causes or threatens to cause a condition of pollution because they could be carried to waters of the State.

19. The discharge of pollutants to waters of the State, except as authorized pursuant to waste discharge requirements, is prohibited by Section 13376 of the California Water Code. Montrose Chemical Corporation does not have valid waste discharge requirements which would authorize a discharge of pollutants.

20. This enforcement action is being taken for the protection of the environment and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Section 15121, Chapter 3, Title 14, California Administrative Code.

21. In October, 1985, EPA issued an Administrative Order on consent (U.S. EPA docket No. 85-04), to Montrose mandating that the scope of the RI/FS must be expanded to investigate the extent of deep soil and groundwater contamination, and the Remedial Investigation presently planned must be fully implemented.

Montrose was directed to submit plans which outline work required by Appendix A (Remedial Investigative Work) of the Consent Order. These plans are to be submitted to the Regional Board and other concerned agencies for review, comment, and ultimate revision.

CLEAN UP AND ABATEMENT ORDER

Order NO. 86-2

1. Clean Up and Abatement Order No. 85-3, issued by the Executive Officer on September 10, 1985 is hereby rescinded.

2. The California Regional Water Quality Control Board, Los Angeles Region, in accordance with Section 13304 of the California Water Code does hereby order Montrose Chemical Corporation of California to investigate the extent of contamination on the Montrose site and adjacent property consistent with EPA Administrative Order on Consent (Docket #85-04). Montrose is hereby ordered to conduct cleanup as may be required after completion of the Remedial Investigation/Feasibility Study. In responding to this Clean Up and Abatement Order Montrose is ordered to follow all EPA directives and to meet all appropriate deadlines concerning investigation of the site and surrounding areas, as outlined in Appendix A of the Administrative Order. An expanded workplan approved by EPA, the Executive Officer, and other concerned agencies must be submitted which will delineate the horizontal and vertical extent of contamination in soils and groundwater on Montrose and adjacent property.

Copies of all revised work plans, technical reports, written progress reports and other documents required by EPA in the Administrative Order shall be submitted to the Executive Officer at the time they are submitted to EPA. The Executive Officer will review these documents showing the data and findings of the remedial investigation and will transmit to EPA the results of that review, including recommendations on specific remedial measures and cleanups to be implemented by Montrose, as warranted.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

Date: March 20, 1986

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BOE-C6-0178255

DDT Still Packs Punch 25 Years Later

Pesticide Dumped at Sea Blamed in Island Birds' Disappearance

By LARRY B. STAMMER, *Times Staff Writer*

PACIFIC GROVE—Twenty-five years after 350 to 700 tons of DDT were dumped into the ocean about 15 miles off Los Angeles, the pesticide's devastating impact is still being felt and may persist for decades.

Results of a new study of sediments found in two abandoned ocean dumps 10 miles from Santa Catalina Island show that DDT is not only still present in high concentrations, but that its presence is probably responsible for the disappearance of the bald eagle and peregrine falcon in the area.

"We can only conclude now that it was this dumping that wiped out these species throughout the Channel Islands," said ecologist Robert W. Risebrough of the Center for Marine Studies at the University of California at Santa Cruz.

These first findings of the study, commissioned by the Los Angeles Regional Water Quality Control Board, were disclosed here Wednesday at the sixth annual International Ocean Disposal Symposium.

Risebrough also said an analysis of chemical "fingerprints" has led him to conclude that the DDT in question was dumped by the Montrose Chemical Co., which manufactured DDT in Torrance.

State records indicated that the firm dumped DDT in the ocean from 1947 to the early 1960s. Attempts Wednesday to reach the company for comment were unsuccessful.

"For a number of years, we thought this problem was over. But over the past several years, some unexpectedly high levels of DDT compounds began to show up in Los Angeles area [fish] and we began to wonder if perhaps the environmental levels of these compounds were not declining as fast as we might have expected," Risebrough said.

After it became widely known a year ago that bottom fish, including the white croaker, had high levels of DDT, the state Department of Health Services posted warnings against eating the fish. The warnings are still in effect.

"The whole system has been contaminated. There are still some high levels in dolphins' blubber and some of the seals," Risebrough said.

DDT concentrations just a year ago in dolphins found in Santa Monica Bay have been as high as 2,500 parts per million (ppm), compared to the federal Food and Drug Administration's maximum recommended level for eating fish of 5 ppm.

Last year, the water quality board commissioned a series of studies of ocean contamination off Southern California, including the two former dump sites.

"We didn't know whether we would be able to see any continuing effect from the dumping. Now I think we have," Risebrough said.

The study is still continuing. However, the early results indicate that significant levels of DDT are persisting on the 2,900-foot deep ocean floor 25 years after the dumping was halted. From there, the chemical, originally in barrels, was gradually cycled through the food chain.

N04 BT

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

Hazardous Materials Management
MAR 14 1986
California Department of Health Services
LOS ANGELES

EPA Environmental News

MONTROSE CHEMICAL CORPORATION SITE

SAMPLING AND QUALITY ASSURANCE PLANS AVAILABLE FOR PUBLIC REVIEW

MARCH 1986

The draft Part II, Phase I Sampling and Quality Assurance Project Plans covering on-site groundwater and soil sampling at the Montrose hazardous waste site are now available for community review at the information repositories listed below. These documents are similar to the plans covering off-site surface water and soil sampling that EPA distributed for community review last December. The plans are important parts of the Remedial Investigation that is designed to examine the extent of contamination. Once EPA approves the plans, we will oversee Montrose's sampling activities.

The groundwater beneath the site, and soil on and around the site, are contaminated with DDT and organic solvents resulting from Montrose's DDT production activities that began in 1947 and spanned 35 years. The Part I on-site soil sampling plans were recently implemented by EPA and results are expected this spring.

The Part II, Phase I Sampling Plan describes the onsite groundwater and soil sampling to be conducted. The accompanying Quality Assurance Project Plan describes field collection techniques and laboratory procedures to be followed to ensure that samples yield accurate data.

If you wish to comment on the plans, please submit your comments by March 31, 1986 to:

Therese Gioia
Remedial Project Manager (T-4-2)
U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

Toll-free Information Service: (800) 231-3075

INFORMATION REPOSITORIES

Carson Public Library
Attn: Catherine O'Connell
151 East Carson Street
Carson, CA 90745
(213) 830-0901

Civic Center Library
Attn: Judy Harrington
3301 Torrance Boulevard
Torrance, CA 90503
(213) 618-5959

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Materials Management Section
FEB 27 1986
California Department of Health Services
LOS ANGELES

25 FEB 1986

Edward Nemecek
Project Coordinator
Hargis & Associates
2223 Avenida De La Playa
La Jolla, California 92037

Dear Mr. Nemecek:

Please find enclosed the final EPA comments on the Off-site Soil, Sediment, and Surface Water Sampling Plan and Quality Assurance Project Plan (QAPP) for the Montrose site. Due to the amount of revisions, these comments cannot be addressed by letter amending the plans, as I thought might be possible. The Sampling Plan can be amended with replacement pages instead of a whole new document, as long as all the comments are addressed. The QAPP, however, must be completely revised with the submittal of a new document.

In order to expedite the revision and approval process, please submit the replacement pages for the Sampling Plan and the new QAPP no later than March 10, 1986. Although the schedule for submission of a third Sampling Plan and QAPP is not outlined in the Consent Order, please note that it was brought about by Montrose's failure to provide approvable plans (which addressed all EPA comments) with its second submission. If you have problems meeting this schedule, contact me immediately.

If you have any questions regarding the enclosed comments, please call me. I look forward to receiving the revisions.

Sincerely yours,

Therese Gioia

Therese Gioia
EPA Project Coordinator

enclosure

cc w/enclosure:

Karl Lytz, Latham & Watkins
D. M. Greeno, Montrose General Manager
R. Ghirelli, RWQCB
N. Acedera, DOHS

FINAL EPA COMMENTS ON OFF-SITE SOIL, SEDIMENT, AND SURFACE WATER SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN FOR MONTROSE SITE

Sampling Plan Comments

1. Page 4, Target Chemical List: Revise list to reflect that "total DDT" means all isomers and breakdown products (DDD and DDE). Make a statement that any reference to "total DDT" in the Sampling Plan reflects the definition of "total DDT" in the list.

2. Page 5, last ¶: Revise statement regarding analytes for the neighborhood areas to reflect that total BHC will also be included in the analysis. Also include a statement that reflects that all Target Chemicals will be quantified using the analytical method proposed.

3. Page 10, Table 4: The analytical method for volatile organic soil (sediment in this case) samples specifies that 30 grams of sample must be provided, therefore, at least a 240 ml VOA vial will need to be used.

4. Page 11, item #9: The term "Residential areas" does not adequately define the locations being sampled; some of the locations are industrial areas. The term "Neighborhood areas" should be used in reference to these locations.

5. Page 13, ¶ 1: A sand-bentonite mix is recommended instead bagged sand for filling in bore holes.

6. Page 13 last ¶: Describe the method for providing splits to EPA. EPA should receive the same sequential sleeve each time it requests a split sample, e.g. Montrose takes middle sleeve each time, while EPA receives bottom sleeve each time it requests a split sample. Change text to reflect that both the top and bottom of each sleeve will be labelled and capped. Explain that 1 duplicate sample or 10%/day/matrix, whichever is greater, and 1 background sample/week/matrix will be collected and analyzed for all Target Chemicals.

7. Page 15, Table 5: This table should list the detection limit for all Target Chemicals, as was partially done in Table 7.

8. Page 16, ¶ 1: Include the data supporting the long term wind direction as an attachment to the sampling plan in order to fully document the rationale for the neighborhood soil sampling scheme.

9. Page 16, ¶ 2: Provide rationale for choosing the distance of the radii.

10. Page 20, last ¶: Revise decontamination procedure to conform with the recommended EPA procedure. Include collection and analysis of 1 final rinsate sample/day/matrix. The EPA decontamination procedure is as follows:

- Wash with non-phosphate detergent
- Rinse with tap water
- Rinse with solvent (methanol or hexane)
- Rinse with tap water twice
- Rinse with certified organic-free water

11. Page 22, ¶ 1: Describe the alternative wet weather surface water sampling method and locations for Consolidated Slip.

12. Page 25, Table 7: Since the surface water samples are being analyzed for all Target Chemicals, the detection limits for all Target Chemicals should be included.

13. Page A-10, last ¶: Provide locations for the OVA monitoring described in this paragraph.

14. QAPP Page References Revisions: Since the QAPP is being revised, the QAPP page numbers referenced in the Sampling Plan may change. Revise the Sampling Plan to reflect the correct QAPP pages referenced.

Quality Assurance Project Plan (QAPP)

1. General Comment: In order to address the previous comment regarding data reduction, validation, and reporting, revise the plan to reflect that EPA will conduct the QA/QC of the raw analytic data reported by the laboratory and the laboratory will provide all the necessary documentation to EPA. Attach the 3-page list provided by EPA to the plan as an example of the types of information the laboratory will provide. EPA will use the same standards to evaluate the Montrose data as it uses for the Contract Laboratory Program data. Although EPA will QA/AC the data, precision, accuracy, completeness, representativeness, and comparability of the data must still be evaluated by Montrose. Therefore, revise the plan to include QA objectives for:

   1) Representativeness - expressess the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition;

   2) Comparability - expressess the confidence with which one data set can be compared to another;

   3) Corrective Action - specifically related to the laboratory; and

   4) Quality Assurance Reports - describe the monthly report referenced in the flow chart.

2. The names of the individuals should be included on the signature/approval page.

3. The laboratory quality assurance procedures presented are inadequate. Include the up-dated version of the laboratory's QA manual in Appendix A.

4. Page 5: The project description should be supplemented with information from the Sampling Plan. See Attachment 1 which has text for use in replacing existing text.

5. Page 12, last ¶: The criteria for defective results of "percent recoveries greater 20%" should read "percent recoveries of less than 80%" in order to be acceptable.

6. Page 13, Data Requirements: Revise this section to reflect that the analyses will quantify the presence of all the Target Chemicals.

7. Page 17, Table 2: The description on preparation of sample containers is incomplete. A solvent rinse is required for all containers used to collect organic samples. Preparation of the brass sleeves should also be discussed. See Attachment 2 for the prescribed sample container preparation for method 608 (also applicable to method 624). Do not use acetone for the solvent rinse, as it is a Target Chemical.

8. Page 18, Table 3: Expand this table to include the same types of information for the neighborhood surface soil samples and the sediment samples. The analytical method for volatile organic soil samples calls for 30 grams of sample, therefore, at least a 240 ml vial will be necessary for the volatile organic soil samples.

9. Page 20, Sampling Procedures: The general sampling procedures as described in the Sampling Plan are much better than those in the QAPP. See Attachment 3 for the sections from the Sampling Plan which should be inserted into the QAPP.

10. Page 21, 4th bullet: The middle sleeve should be used for analysis each time and should be capped immediately after it is removed from Drive Sampler. OVA measurements should be made on the ends of the top and bottom sleeves adjacent to the middle sleeve. OVA measurements on the middle sleeve may result in a loss of contaminants from the sample.

11. Page 21, 6th bullet: Revise statement to reflect that the top and bottom of each sleeve will be labelled as such.

12. Page 21, 8th bullet: Include a discussion of the new decontamination procedures to be used:

    - Wash with non-phosphate detergent
    - Rinse with tap water
    - Rinse with solvent (methanol or hexane)
    - Rinse with tap water twice
    - Rinse with certified organic-free water

13. Page 21: Add statement about collection of background soil samples for the soil boring event. One background per week should be collected and analyzed for all Target Chemicals; a brass sleeve packed with surface soil (from a location well outside any influence from the Montrose site) to simulate a sub-surface soil background sample is acceptable in lieu of an actual sub-surface background soil sample.

14. Page 22, Neighborhood Surface Soil Sampling: Revise the decontamination procedure and describe how the decontamination fluids will be handled.

15. Page 22, ¶ 2: Add that the background surface soil sample will be analyzed for all the Target Chemicals.

16. Page 22, last ¶: Method 608 indicates that the bottle for pesticide water samples must not be prewashed/rinsed with the sample before collection. Revise QAPP to indicate that water samples collected for analysis by method 608 will not be rinsed with sample before collection. See Attachment 4.

17. Page 23, Surface Water Sampling: The surface water collection procedures for the different areas are not adequately explained. Revise this section to clearly show the sample collection

methods to be employed in each different area, near-site, Torrance Lateral, Dominguez Channel and Consolidated Slip. In what areas will sampler be able to submerse the sample container in the water? Where and how is the pole and teflon beaker or PVC point source bailer to be used?

18. Page 24, 3rd bullet: Revise decontamination procedures, and describe what will be done with the decontamination fluids.

19. Page 24, Surface Water Sampling: Add the sampling method and locations for the wet weather sampling in Consolidated Slip.

20. Page 24, Sediment Sampling: Include a section on the sediment sampling method, including decontamination procedures, locations, sample size, etc.

21. Page 24: Add a sentence such as "Additional details on the location, number, and frequency of samples are provided in the sample plan." This statement will provide additional information for the reader and is not considered a reference to the sampling plan.

22. Page 25, Blank and Duplicate Samples, ¶ 1: Each shipping container which has volatile organic water samples in it must have a trip blank; EPA recommends two 40 ml vials of certified organic-free water be used for the trip blank. The blank for all other Target Chemicals is the one liter container with ceritified organic-free water. A field blank is submitted for analysis per shipment (there may be more than one shipping container per shipment), which is usually one per day.

23. Page 25, Blank and Duplicate Samples, ¶ 2: Include a discussion of the duplicate sample collection for soil boring samples, neighborhood surface soil samples, and sediment samples. Discuss frequency of collection and analyses to be run.

24. Page 25, Blank and Duplicate Samples, ¶ 3: Revise the discussion on EPA-split samples to reflect that each brass sleeve will be sealed on both ends and the top and bottom labelled, also include a discussion of which sleeve will be provided to EPA; Montrose should use the middle sleeve for its sample. EPA snould be provided with the same sleeve (top or bottom consistently) each time it requests a split sample. Include a section on what type of containers (size is most important) will be provided by Montrose to EPA for the split samples.

25. Page 25, Blank and Duplicate Samples: Expand the discussion of blank and duplicate samples to include rinsate samples. EPA suggests one rinsate sample/day/matrix.

26. Page 32, Corrective Action Procedures: As explained in comment #1, the corrective actions to be taken in regard to the laboratory must be explained.

27. Projected Sample Holding Times: Include a new table outlining the projected holding times between sample collection and analysis/extraction, and extraction and analysis for the water, soil, and sediment samples. The EPA maximum holding time for volatile organics is 14 days between sample collection and analysis. The EPA maximum holding time for pesticides is 7 days between sample collection and extraction and 40 days between extraction and analysis.

28. Sample Preparation Procedures: Include a table or new section either in the Appendix or main body of the text listing the soil sample preparation procedures to be utilized by the laboratory, e.g. method 5030 for chlorobenzene analysis? method 3540 or 3550 for pesticide analysis?

29. Neighborhood Surface Soil Sample Analysis: Provide a discussion in the QAPP of why all Target Chemicals are not included in the analysis of the neighborhood surface soil samples.

30. Analytical Detection Limits: The analytical detection limits for all Target Chemicals must be specified in the QAPP.

ATTACHMENT 1

NEW TEXT "A"

SAMPLING OBJECTIVES

The objective of this sampling program is to determine the extent and level of off-site soil, sediment, and surface water contamination which may have resulted from activities at the Montrose site. Some off-site sampling activities have already been conducted. An additional objective includes gathering data of sufficient quality to support the Feasibility Study. This will be assured by following the sampling protocols described on pg. 20-29. ~~in the QAPP~~. The quantity of data to be gathered is specified in Appendix A of the consent order. The objective is to obtain data that would be adequate to determine the level and extent of contamination so that response options and their cost effectiveness can be evaluated.

~~Consistent with this plan's subject matter and time objectives, a phased sampling plan has been developed for certain aspects of RIW. As described below, certain initial analytical results will be obtained and evaluated to determine whether additional data is needed. If more information is required, the initial data will be used as the technical basis for defining precisely the frequency and location of any additional sampling activities.~~

The Target Chemicals in this investigation, chosen by the EPA in an unreleased preliminary report of on-site soils analyses conducted in June, 1985, and verbally forwarded to Montrose at a meeting on January 21, 1986, are:

- DDT (all isomers and breakdown products DDE + DDD)
- BHC (all isomers)
- Monochlorobenzene
- Dichlorobenzene
- Benzene
- Chloroform
- Acetone

Throughout the remainder of the ~~report~~ plan these chemicals will be referred to as the Target Chemicals.

BOE-C6-0178265

QAPP Page to be revised.

off-site soil, sediment, and surface water sampling, on-site soil sampling and groundwater monitoring of the Bellflower aquitard and Gage aquifer. Insert New Text "A" ~~Samples will be analyzed for the Target Chemicals (Sampling Plan, page 9).~~ This QAPP addresses only the first phase of RIW tasks and includes the off-site soil, sediment, and surface water tasks. The RIW will be performed for Montrose Chemical Corporation under the direction and supervision of Hargis + Associates subject to the review and approval of the EPA. Metcalf and Eddy, Inc. will act as oversight personnel for the EPA.

~~The objective of the sampling program is to determine the extent of off-site soil, sediment, and surface water contamination which may have resulted from activities at the Montrose site. Some off-site sampling activities have already been conducted.~~ Additional off-site sampling will be performed in phases, based on results of the previous sampling. A phased approach will allow interim evaluation of the analytical results, and provide a basis for determining the number, frequency and location of additional samples should they be needed.

The off-site field activities will include soil sampling, sediment sampling, and surface water runoff sampling. A complete report incorporating laboratory analytical results and evaluation of the data collected during the off-site sampling program will be prepared.

Nine areas have been identified for sampling activities. These areas include:

1. The perimeter of the site;

2. The utility easement area south of the site;

3. The drainage ditch that runs parallel to Normandie Avenue from the site to the catchment basin at Farmer Brothers;

ATTACHMENT 2

quantitative confirmation of results for all of the parameters listed above, using the extract produced by this

1.3 The method detection limit (MDL, defined in Section 14.1)[1] for each parameter is listed in Table 1. The MDL for a specific wastewater may differ from those listed, depending upon the nature of interferences in the sample matrix.

1.4 The sample extraction and concentration steps in this method are essentially the same as in methods 606, 609, 611 and 612. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selection of aliquots as necessary to apply appropriate cleanup procedures. The analyst is allowed the latitude to select gas chromatographic conditions appropriate for the simultaneous measurement of combinations of these parameters.

1.5 Any modification of this method, beyond those expressly permitted, shall be considered as major modifications subject to application and approval of alternate test procedures under 40 CFR 136.4 and 136.5.

1.6 This method is restricted to use by or under the supervision of analysts experienced in the use of gas chromatography and in the interpretation of gas chromatograms. Each analyst must demonstrate the ability to generate acceptable results with this method using the procedure described in Section 8.2.

2. Summary of Method

2.1 A measured volume of sample, approximately one-liter, is solvent extracted with methylene chloride using a separatory funnel. The methylene chloride extract is dried and exchanged to hexane, during concentration to a final volume of 10 mL or less. Gas chromatographic conditions are described which permit the separation and measurement of the parameters in the extract by electron capture GC[2].

2.2 The method provides a Florisil column procedure and elemental sulfur removal procedure to aid in the elimination of interferences that may be encountered.

3. Interferences

3.1 Method interferences may be caused by contaminants in solvents, reagents, glassware, and other sample processing hardware that lead to discrete artifacts and/or elevated baselines in gas chromatograms. All of these materials must be routinely demonstrated to be free from interferences under the conditions of the analysis by running laboratory reagent blanks as described in Section 8.5.

3.1.1 Glassware must be scrupulously cleaned[3]. Clean all glassware as soon as possible after use by rinsing with the last solvent used in it. This should be followed by detergent washing with hot water, and rinses with tap water and distilled water. It should then be drained dry and heated in a muffle furnace at 400 °C for 15 to 30 minutes. Some thermally stable materials, such as PCBs, may not be eliminated by this treatment. Solvent rinses with acetone and pesticide quality hexane may be substituted for the muffle furnace heating. Thorough rinsing with such solvents usually eliminates PCB interference. Volumetric ware should not be heated in a muffle furnace. After drying and cooling, glassware should be sealed and stored in a clean environment to prevent any accumulation of dust or other contaminants. Store inverted or capped with aluminum foil.

3.1.2 The use of high purity reagents and solvents helps to minimize interference problems. Purification of solvents by distillation in all-glass systems may be required.

3.2 Interferences by phthalate esters can pose a major problem in pesticide analysis when using the elution capture detector. These compounds generally appear in the chromatogram as large eluting peaks, especially in the 15 and 50% fractions from Florisil. Common flexible plastics contain varying amounts of phthalates. These phthalates are easily extracted or leached from such materials during laboratory operations. Cross contamination of clean glassware routinely occurs when plastics are handled during extraction steps, especially when solvent wetted surfaces are handled. Interferences from phthalates can best be minimized by avoiding the use of plastics in the laboratory. Exhaustive cleanup of reagents and glassware may be required to eliminate background phthalate contamination[4,5]. The interferences from phthalate esters can be avoided by using a microcoulometric or electrolytic conductivity detector.

3.3 Matrix interferences may be caused by contaminants that are coextracted from the sample. The extent of matrix interferences will vary considerably from source to source, depending upon the nature and diversity of the industrial complex or municipality being sampled. The cleanup procedures in Section 11 can be used to overcome many of these interferences, but unique samples may require additional cleanup approaches to achieve the MDL listed in Table 1.

4. Safety

4.1 The toxicity or carcinogenicity of each reagent used in this method has not been precisely defined; however, each chemical compound should be treated as a potential health hazard. From this viewpoint, exposure to these chemicals must be reduced to the lowest possible level by whatever means available. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of material data handling sheets should also be made available to all personnel involved in the chemical analysis. Additional references to laboratory safety are available and have been identified[6-8] for the information of the analyst.

4.2 The following parameters covered by this method have been tentatively classified as known or suspected, human or mammalian carcinogens: 4,4′-DDT, 4,4′-DDD, the BHCs, and the PCBs. Primary standards of these toxic compounds should be prepared in a hood.

5. Apparatus and Materials

5.1 Sampling equipment, for discrete or composite sampling.

5.1.1 Grab sample bottle—Amber glass, one-liter or one-quart volume, fitted with screw caps lined with Teflon. Foil may be substituted for Teflon if the sample is not corrosive. If amber bottles are not available, protect samples from light. The container must be washed, rinsed with acetone or methylene chloride, and dried before use to minimize contamination.

5.1.2 Automatic sampler (optional)—Must incorporate glass sample containers for the collection of a minimum of 250 mL. Sample containers must be kept refrigerated at 4 °C and protected from light during compositing. If the sampler uses a peristaltic pump, a minimum length of compressible

ATTACHMENT 3

QAPP Page to be revised

SAMPLING PROCEDURES

Because these data will be used to determine the extent and nature of potential contamination, the procedures presented in this section are designed to insure that: 1) all samples obtained are collected in a manner consistent with project objectives; 2) all samples are identified, preserved, and transported in a manner such that data are representative of the actual site conditions and no information is lost in sample transfer.

Prior to each sampling round, the Project/Task Manager will assure that all sample containers have been prepared to EPA laboratory method standards (Table 2).

* Insert New Text "B"

SOIL SAMPLING

Soil samples will be collected from sampling locations around the perimeter of the Montrose site, the power company easement area south of the site, the historical drainage area and along four transects located in the drainage ditch adjacent to Normandie Avenue. Samples will be collected every foot to a depth of five feet at each sampling location. Additional samples will be obtained where changes in lithology or any unusual discolorations of the soil occur. The following procedure will be used to obtain soil samples:

- Review project objectives with all personnel and identify boring sites to be drilled each day.
- Review health and safety procedures with all personnel.
- Record background OVA measurements every 3 hours.
- Record daily weather conditions and site characteristics.

New Text "B"

Sample Collection Procedures

Surface soil will be sampled using a hand auger or shovel and collected in one 16 ounce by volume glass mason jar. ~~and one 40 ml VOA vial~~ Glass containers have been chosen due to their relative inertness to the chemicals of concern. Deeper soil samples will be collected using split spoon drive samplers with six inch by two inch brass liners. Sediment samples, with the exception of those collected at Dominguez Channel and Consolidated Slip, will be collected using a shovel, trowel, or telescoping pole with attached beaker, depending on access and the depth of water, if any, overlying the sediment.

Sediment samples from Dominguez Channel and Consolidated Slip will be collected with a stainless steel benthic sampler. At Consolidated Slip, approximately three to four ounces of sample will be taken from the center of the approximately three pounds of sediment collected in the benthic sampler at each point on the transect. A small scoop will be used to transfer sediment from the approximate center of the sample (avoiding the uppermost portion of the sample) to the 16 ounce glass jar. By repeating the process five times along the transect, a representative composite sample will be collected.

Samples collected using split spoon brass sleeves will first be analyzed by OVA or HNu at each end then will be sealed in the tubes with teflon liners and plastic end caps. End caps will be secured with electrical tape.

Each sample container will be labeled immediately and stored on ice. Samples will be shipped or delivered to the laboratory within 24 hours. All sampling devices will be cleaned prior to each sampling event with a TSP detergent wash, water rinse, and deionized water rinse. Specific soil sampling procedures, including cleaning and rinsing procedures, ~~are~~ discussed in the QAPP, pages 9 and 10.

BOE-C6-0178271

ATTACHMENT 4

the performance of the laboratory for each spike concentration and parameter being measured.

8.3.1 Calculate upper and lower control limits for method performance:

Upper Control Limit (UCL) = R + 3s
Lower Control Limit (LCL) = R − 3s

where R and s are calculated as in Section 8.2.3. The UCL and LCL can be used to construct control charts[10] that are useful in observing trends in performance. The control limits above be replaced by method performance criteria as they become available from the U.S. Environmental Protection Agency.

8.3.2 The laboratory must develop and maintain separate accuracy statements of laboratory performance for wastewater samples. An accuracy statement for the method is defined as R ± s. The accuracy statement should be developed by the analysis of four aliquots of wastewater as described in Section 8.2.2, followed by the calculation of R and s. Alternately, the analyst may use four wastewater data points gathered through the requirement for continuing quality control in Section 8.4. The accuracy statements should be updated regularly[10].

8.4. The laboratory is required to collect a portion of their samples in duplicate to monitor spike recoveries. The frequency of spiked sample analysis must be at least 10% of all samples or one sample per month, whichever is greater. One aliquot of the sample must be spiked and analyzed as described in Section 8.2. If the recovery for a particular parameter does not fall within the control limits for method performance, the results reported for that parameter in all samples processed as part of the same set must be qualified as described in Section 13.5. The laboratory should monitor the frequency of data so qualified to ensure that it remains at or below 5%.

8.5 Before processing any samples, the analyst should demonstrate through the analysis of a one-liter aliquot of reagent water, that all glassware and reagent interferences are under control. Each time a set of samples is extracted or there is a change in reagents, a laboratory reagent blank should be processed as a safeguard against laboratory contamination.

8.6 It is recommended that the laboratory adopt additional quality assurance practices for use with this method. The specific practices that are most productive depend upon the needs of the laboratory and the nature of the samples. Field duplicates may be analyzed to monitor the precision of the sampling technique. When doubt exists over the identification of a peak on the chromatogram, confirmatory techniques such as gas chromatography with a dissimilar column, specific element detector, or mass spectrometer must be used. Whenever possible, the laboratory should perform analysis of standard reference materials and participate in relevant performance evaluation studies.

9. Sample Collection, Preservation, and Handling

9.1 Grab samples must be collected in glass containers. Conventional sampling practices[11] should be followed, except that the bottle must not be prewashed with sample before collection. Composite samples should be collected in refrigerated glass containers in accordance with the requirements of the program. Automatic sampling equipment must be as free as possible of Tygon tubing and other potential sources of contamination.

9.2 The samples must be iced or refrigerated at 4 °C from the time of collection until extraction. If the samples will not be extracted within 72 hours of collection, the sample should be adjusted to a pH range of 5.0 to 9.0 with sodium hydroxide or sulfuric acid. Record the volume of acid or base used. If aldrin is to be determined, add sodium thiosulfate when residual chlorine is present. U.S. Environmental Protection Agency methods 330.4 and 330.5 may be used to measure chlorine residual[12]. Field test kits are available for this purpose.

9.3 All samples must be extracted within 7 days and completely analyzed within 40 days of extraction[2].

10. Sample Extraction

10.1 Mark the water meniscus on the side of the sample bottle for later determination of sample volume. Pour the entire sample into a two-liter separatory funnel.

10.2 Add 60 mL methylene chloride to the sample bottle, seal, and shake 30 seconds to rinse the inner surface. Transfer the solvent to the separatory funnel and extract the sample by shaking the funnel for two minutes with periodic venting to release excess pressure. Allow the organic layer to separate from the water phase for a minimum of 10 minutes. If the emulsion interface between layers is more than one-third the volume of the solvent layer, the analyst must employ mechanical techniques to complete the phase separation. The optimum technique depends upon the sample, but may include stirring, filtration of the emulsion through glass wool, centrifugation, or other physical methods. Collect the methylene chloride extract in a 250-mL Erlenmeyer flask.

10.3 Add a second 60-mL volume of methylene chloride to the sample bottle and repeat the extraction procedure a second time, combining the extracts in the Erlenmeyer flask. Perform a third extraction in the same manner.

10.4 Assemble a Kuderna-Danish (K-D) concentrator by attaching a 10-mL concentrator tube to a 500-mL evaporative flask. Other concentration devices or techniques may be used in place of the Kuderna Danish if the requirements of Section 8.2 are met.

10.5 Pour the combined extract through a drying column containing about 10 cm of anhydrous sodium sulfate, and collect the extract in the K-D concentrator. Rinse the Erlenmeyer flask and column with 20 to 30 mL of methylene chloride to complete the quantitative transfer.

10.6 Add one or two clean boiling chips to the evaporative flask and attach a three-ball Snyder column. Prewet the Snyder column by adding about 1 mL methylene chloride to the top. Place the K-D apparatus on a hot water bath (60 to 65 °C) so that the concentrator tube is partially immersed in the hot water and the entire lower rounded surface of the flask is bathed with hot vapor. Adjust the vertical position of the apparatus and the water temperature as required to complete the concentration in 15 to 20 minutes. At the proper rate of distillation the balls of the column will actively chatter but the chambers will not flood with condensed solvent. When the apparent volume of liquid reaches 1 mL, remove the K-D apparatus and allow it to drain and cool for at least 10 minutes.

10.7 Increase the temperature of the hot water bath to about 80 °C. Momentarily remove the Snyder column, add 50 mL of hexane and a new boiling chip and reattach the Snyder column. Prewet the column by adding about 1 mL of hexane to the top. Concentrate the solvent extract as before. The elapsed time of concentration should be 5 to 10 minutes. When the apparent volume of liquid reaches 1 mL, remove the K-D apparatus and allow it to drain and cool at least 10 minutes.

Domenechelli

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Hazardous Materials Man.
JAN 06
California ... of Health Services
Los Angeles

2 JAN 1986

BY DHL

Edward Nemecek
Montrose Project Coordinator
Hargis & Associates
2223 Avenida De La Playa
Suite 300
La Jolla, California 92037

Re: Comments on the Draft Off-site Sampling Plan and QAPP for the Montrose Chemical Site, near Torrance

Dear Ed:

The Draft Off-site Sampling Plan and Quality Assurance Project Plan (QAPP) you recently submitted have been reviewed by EPA and various other federal, state, and local agencies interested in the project. Attached for your review is a compilation of the technical comments submitted.

In general, the plans were much improved from the first submittal in April 1985. However, as detailed in the attached comments, the rationale for your technical approach to the off-site sampling was not evident, making effective review difficult. As we have stated many times in previous discussions, our evalutation of Montrose's technical approach hinges on full presentation of the technical rationale behind the approach. If the technical rationale is not presented, we have no technical basis for our evaluation, and therefore, cannot approve the approach.

In addition, the stated objective of the Remedial Investigative Work (RIW) to be conducted by Montrose does not fully address the objective of the Remedial Investigation. The RIW conducted by Montrose must produce data not only to determine "the extent of offsite soil, sediment, and surface water contamination which may have been caused by activities at the Montrose site," but must also gather data of necessary and sufficient quality and quantity to support the Feasibility Study. The quality of the data is ensured through adherence to an acceptable QAPP. A sufficient quantity of data must also be collected. For example, the objective of sampling in Dominguez Channel is not only to determine if contaminants are present, but also to determine the total quantity of contaminated material in order to examine removal and treatment options and their cost effectiveness.

Although I believe we can reach agreement on an approvable Sampling Plan and QAPP, I am concerned that final EPA approval of the plans will delay the surface water sampling beyond the rainy season. Addressing that concern, I propose that we first concentrate on finalizing the QAPP and surface water portion of the Sampling Plan so the field work can commence as soon as possible.

In addition, although you have sent EPA copies of the request for access letters sent to the various entities involved, follow-up on the letters and close coordination with the concerned agencies is necessary in order to obtain timely access. The companies and agencies from which you must obtain access are large and diverse, therefore, it is necessary for you to make sure that the appropriate branch of any company or agency is aware of the need for access.

I will be out of the office January 6-10, but will be available the remainder of January if you have any questions or if you would like to have a technical meeting. I look forward to discussing the plans with you.

Sincerely,

Therese Gioia

Therese Gioia
Project Coordinator

attachment

cc: S. Rotrosen, Montrose
K. Lytz, Latham & Watkins
A. Bellomo, DOHS
R. Ghirelli, RWQCB

Attachment

Specific Comments on the Montrose Draft Off-site Sampling Plan and QAPP

SAMPLING PLAN

Sampling Objectives, page 3:

As discussed in the transmittal letter, the sampling objectives as stated here do not encompass the complete objective of the Remedial Investigation.

Although Montrose obviously feels "significant" off-site sampling has already been conducted, the data from previous off-site sampling is not necessarily usable in the Feasibility Study (FS), therefore, for EPA's purpose (conduct of an FS) the previous off-site sampling is not "significant."

Historical Sampling Results, pages 4-7

What is the purpose of reiterating previous sampling results? If the purpose is to support the locations for the RIW soil samples then a map showing the locations of the previous sampling points and the concentrations observed for each location is necessary. Also, a statement of the validity of the earlier sampling results is also necessary; Chain of Custody forms and other QA/QC support for Montrose's efforts should be provided.

Sampling Locations and Methodology, pages 9 & 10

A discussion of known parameters for chemical analysis is required prior to discussions of methodology, so that the methodology can be evaluated for its appropriateness in obtaining a sample for that particular chemical.

Define what is meant by "sufficient" sediment in paragraph 3, page 9. If sufficient means enough sediment to obtain a sample for analyses, then define how much sediment is needed for the analyses.

On page 10, it is stated that samples will be collected but the process of describing the samples is missing. All samples should be collected and described. Also, EPA splits will be sent to a CLP laboratory which may not be the same lab used by Montrose.

Table 1, page 11:

In the historical drainage area, the preferred arrangement of the transects is to combine the two transects proposed into one longer transect across the suspected location of the historic drainage area. Using this alternative arrangement decreases the chance of missing the historic drainage area. Also, as discussed previously, a shallow trench through this area is preferred to better characterize soil deposition patterns which would confirm the presence of the drainage path.

Appendix A of the Consent Order identifies 32 soil borings in the near-site drainage area to Farmer Brothers catch basin and in the utility easement. Table 1 only indicates 28 soil boring locations. Four additional soil boring locations are requested. We suggest you locate these 4 borings in the historical drainage area to augment the 8 soil borings.

Split spoon sampling is listed in Table 1 as a sampling methodology. Does this refer to split spoon with brass liners? If so, what type and size of liner is proposed?

The use of a full size shovel in the Kenwood Drain may be difficult. The use of a trowel should be included as an alternative method.

Appendix A of the Consent Order states that Target Chemicals will be analyzed for unless the transport mechanism away from the site precludes a reasonable expectation of finding the Target Chemical. In reference to Table 1, provide rationale for not analyzing for the full list of Target Chemicals. Also, the Sampling Plan should specify what total DDT means, e.g. its isomers and its breakdown products, DDD and DDE.

Is a 3-inch sample sufficient volume for analysis of the sediments? Reference QAPP (section and page number) where it states the required sample size for the various analyses.

The approximate depth of the sediment at the sampling locations must be determined. How will this determination be made at the various locations?

Table 2, page 12:

What is the technical rationale for the six-part analytical scheme? Assuming the rationale is the immobility of DDT in soil, and considering that some off-site areas received MCB run-off or spills, the possibility of MCB carrying DDT through the soils (as apparently happened on-site) should be examined.

EPA has concerns that the six-part analytical scheme will not work because the EPA maximum holding times for the samples would be exceeded. What steps will be taken by Montrose to ensure that holding times will not be exceeded?

Assuming proper technical rationale for the analytical scheme can be provided, EPA has another concern. There is some evidence, as stated by Hargis & Associates, that the pollutants of concern may have an affinity for soils of higher clay content than soils of higher sand content. With this in mind, it is possible that samples at depths of 1- and 3-feet could be of a high sand content while samples at depths of 4- or 5-feet could be of a high clay content. Under this scenario, analysis of only the 1- and 3-foot samples could indicate low or no contamination when in fact samples at depths of 4- and 5-feet could have significant contamination. This methodology should be amended to provide for analysis of all samples with a high clay content if such a stratification exists in any of the soil borings. In addition, all samples which have higher than background OVA or HNu readings should also be analyzed.

Finally, if the six-part analytical scheme is to be approved, the specific concentration levels of pollutants which will trigger analysis of further samples must be described, with accompanying rationale for selecting that level.

Neighborhood Shallow Soil Samples, page 13:

The wind rose or any other data substantiating the selection of the sampling arc must be provided in the sampling plan. Wind data from the Montrose site itself (collected during grading and capping) will be the most reliable. Use of correspondence as substantiation is not acceptable.

Present the rationale for the selection of the sample points. Also, include a more detailed description of each sampling point, whether it is a residence, school yard, industrial greenway, etc. Provide the rationale for the proposed radii distances and 50% at >1 mg/kg criteria for initiating a second phase.

Neighborhood soil sampling is to occur in designated neighborhoods. The neighborhoods immediately southwest and southeast of the site are the designated neighborhoods, therefore, add or shift one sample location to the southwest neighborhood.

Sediment Samples, page 14:

Describe in detail how sediment samples in Consolidated Slip will be composited.

Table 3, page 15:

Provide the technical rationale for the selected locations of the sediment samples in Dominguez Channel and the locations and approach for sediment sampling in Consolidated Slip. If sediment is not found at precisely the locations specified in Kenwood Drain and Torrance Lateral, what is the proposed procedure for obtaining sediment samples? A method for selecting alternative sampling locations should be included in the plan.

Sample Collection Procedures, page 16:

This discussion of the procedures is incomplete. Expand on the procedures to be followed (e.g. compositing), or if the procedures are present in the QAPP, reference the section and page where it can be found. The type of detail which should be included is as follows: 1) the quantity of material that must be obtained for each type of sample; 2) the specific cleaning and rinsing procedures to be followed; 3) description of the compositing procedures; etc. Depending on the Target Chemicals chosen, certified organic free water may be required rather than deionized water.

Field Measurements, page 16:

Soil descriptions must be included for all soil samples. OVA or HNu readings should be taken of all soil samples. Descriptions of the location and depth of all samples must also be included.

page 17:

What type of flight augers will be used? Describe the drilling method more fully. Whenever the QAPP is referenced, the section and page number should be included.

Surface Water Sampling, page 18, paragraph 1:

To the maximum extent possible, the details for obtaining splits for EPA must be worked out now, prior to approval of the sampling plan. If possible, EPA and Montrose should concentrate on approving this the QAPP and this part of the plan first in order for conduct of the surface water sampling before the end of the rainy season.

Sample Collection Procedures, page 20:

How will the cross-sectional area be estimated? How many floating objects will be used in determining the velocity? What portion of the stream will be used for the velocity tests? Will the sampling team bring suitable floating objects? How will the samples be refrigerated? What other packing materials will be used to prevent breakage? Explain in detail how the water samples will be composited using the PVC point source bailer.

Table 4, page 21:

Provide the rationale for not including the full list of Target Chemicals in the analyses of samples SW-6 through SW-11.

Field Measurements and Equipment Requirements, page 22:

When will samples for routine constituents and trace metals be collected?

Laboratory Analysis, page 23, second paragraph:

Provide the rationale for not including the full list of Target Chemicals for analyses of all samples.

Off-site Safety Plan, page 29:

A discussion of MCB should be included in the safety plan as it is a chemical of concern.

Appendix A, page A-10:

The Health & Safety Plan is generally acceptable, with two exceptions:

1) The plan does not specify proper safety procedures for entry into storm sewers for sediment sampling. Working in confined spaces like manholes or sewers is hazardous and requires special safety procedures (see NIOSH Criteria for Recommended Standard: Working in Confined Spaces). These procedures include:

a. establishing traffic barriers and warnings signs around manholes;

b. monitoring prior to entry for oxygen, flammable or explosive, and toxic gas levels;

c. monitoring the items in (b) while work is in progress;

d. use of blowers to ventilate manhole or sewer if oxygen deficient, explosive, or toxic atmospheres are encountered;

e. use of a safety harness and line;

f. a minimum of one standby person; and

g. protective clothing (if warranted).

The Los Angeles Flood Control District should be contacted for their specific requirements before allowing entry into the sewer.

2) The Safety plan should clearly state that "background" levels for environmental monitoring must be established in a location well away from the influence of possible chemical releases from sampling activities or from diesel exhaust pipes.

Decontamination and Disposal, page A-11:

This plan must address the generation, storage, and possible removal of soil boring cuttings, personnel protective clothing, and decontamination solutions generated during soil sampling.

Montrose has responsibility for compliance with all federal, state, and local regulations including RCRA (CFR Title 40 Parts 260, 262, 265, 267, 727). EPA is in the process of interpreting RCRA requirements for CERCLA sites and issued an interim policy statement in the Federal Register in November 1985. Montrose must establish procedures which satisfy EPA Region 9 regarding the disposal of all hazardous wastes generated as part of this sampling activity.

QUALITY ASSURANCE PROJECT PLAN

General Comments:

1) The following sections were not addressed in the plan:

- QA Objectives in terms of precision, accuracy, completeness, representativeness and comparability;
- Data reduction, validation and reporting (specifically related to the laboratory generated data);
- Specific procedures to be used to routinely assess data precision, accuracy and completeness;
- Corrective actions (specifically related to the laboratory);
- Quality assurance reports to management (although the flow diagram does include a statement on monthly QA reports, no details on these reports is provided in the text.

2) A signature/approval page should be included. It will be signed by the Montrose QA/QC officer and project manager and the EPA QA/QC officer and project manager.

3) Laboratory quality assurance procedures, specific to the parameters of interest, should be provided.

4) Describe the preparation of the sample containers.

The QAPP should comply with the EPA guidance document entitled, "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80," December 29, 1980.

Montrose must assure EPA that it will review all laboratory data in depth to ensure quality assurance/quality control. If Montrose is unable to provide such an assurance, then EPA will conduct the review. In order to conduct a quality assurance/quality control review, EPA will need specific documents from the laboratory.

Project Description, pages 4 - 6:

The Project Description should indicate the requirements of the Consent Decree, specifically the sampling and analytical requirements.

Project Organization and Responsibility, figure 1:

The CLP data package will not be reviewed and approved by Montrose's Quality Assurance Project Manager as indicated in figure 1. How do the lines of communication flow between the Project Director, QA Project Manager and Project/Task Manager? Does the QA Project Manager give feedback to the Task Manager directly or via the Project Director?

Soil Sampling, pages 9 - 11:

For the soil samples collected in brass sleeves, the top and bottom of the sleeve should be labeled. The middle sleeve should be used for all analyses unless sample recovery is insuffícent.

A background soil sample should be collected and analyzed.

Plastic should be placed upon the ground above the boreholes to prevent blending of the surface and subsurface materials.

The sample sleeves should be capped, labeled, and packed for shipping immediately after the sample is taken. Decontamination of the sampling equipment is secondary to sample collection.

Table 1, page 12:

See previous comments on the six-part analytical scheme in the Sampling Plan comment section (pages 2 & 3 of attachment).

Surface Water Sampling, page 13-14:

What measures have been established to limit the loss of volatile compounds from the surface water samples during collection?

Provide specific details on the technique to be used for surface water sample collection, e.g. volatiles should have zero headspace.

Sampling Handling, Packaging, Shipment, page 16:

What methods will be utilized to prevent breakage and to provide protection of the samples from breakage and melted ice.

Blank and Duplicate Samples, pages 16 & 17:

A blank is required for all analytical parameters. The blank normally consists of 2-40 ml vials (in case of breakage or contamination) for volatiles and 1-1 liter bottle for pesticides.

At what frequency will the duplicates be collected? It is recommended that duplicates be collected at a minimum of 10% or 1 per day per matrix.

If different size bottles will be used for water sample analyses, it may be better to vary which size bottle is used for the organic free sample as a QA/QC check of the different handling of each type of water sample.

All samples which are split with EPA must be collected in identical containers. Montrose can either supply extra bottles to EPA, or EPA can provide bottles to Montrose for the samples which are splits. EPA will collect splits for approximately 20% of the samples.

Field Measurements and Calibration of Equipment, page 19:

These procedures should identify the buffer solutions to be used during calibration of the pH meter.

See previous comment on the use of the 10 ppm above background criteria in the Sampling Plan comment section (page 5 of attachment).

Laboratory Analysis, pages 24 - 34:

The definition of "total DDT" should be explained in the QAPP.

Is there any reason why EPA method 624 was selected for chlorobenzene analysis rather than EPA methods 601 or 602? Methods 601 and 602 are cheaper and can attain lower detection limits, however, second column confirmation is required if chlorobenzene is detected.

What sample preparation procedures will be used on the soil samples, e.g. method 5030 for chlorobenzene and methods 3540 or 3550 for pesticides.

How will aliquots be taken from the brass sleeves? An aliquot taken through the center core of the sample is recommended.

Provide information on the projected holding times between sample collection and analysis/extraction and extraction and analysis for the water and soil samples. See comments regarding the six-part analytical scheme for soil boring samples in Sampling Plan comment section (pages 2 & 3 of attachment).

What mechanisms, e.g. blind samples, laboratory audits, will be used to assess the performance of the laboratory, and at what frequency will these mechanisms be employed.

TO
John Scandura
ROOM/STA. NO.

FROM
Jan Meyer
ROOM/STA. NO.

REPRESENTING

DATE	TIME	PHONE
12/21		8-454-2437

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- [ ] Re-route
- [ ] Return
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MESSAGE REMARKS

You should see if we can use anything EPA develops for Del Amo.

BY

STD. 7 REV. 1-79
COMBINATION OF STD. 7 AND 11A ROUTE SLIP
MESSAGE

DEC 1986
STATE OF CALIFORNIA
LOS ANGELES

United States Environmental Protection Agency
Regional Administrator 215 Fremont Street San Francisco CA 94105
Region 9 Arizona, California Hawaii, Nevada Pacific Islands

EPA Environmental News

MONTROSE CHEMICAL SITE

SITE INVESTIGATION PLANS AVAILABLE FOR PUBLIC REVIEW

DECEMBER 1985

The draft Part II Sampling and Quality Assurance Project Plans covering off-site sampling activities around the Montrose hazardous waste site are now available for community review and comment at the local information repositories. The Montrose Chemical Corporation submitted the Part II plans to EPA in compliance with the recently signed Consent Order between EPA and Montrose. Once EPA approves the plans, the Agency will oversee Montrose's sampling activities.

Areas on and around the Montrose site are contaminated with significant levels of DDT, a pesticide that was manufactured at the facility from 1947 to 1982. EPA designed a two-part Remedial Investigation to accurately characterize the level and extent of site contamiation. The Sampling and Quality Assurance Project Plans comprise the centerpiece of the two-part Remedial Investigation. The Part I plans covering the on-site sampling effort were recently implemented and results are expected in January 1986.

The Part II Sampling Plan provides the framework for soil sampling around the site perimeter, in nearby site drainage areas, and in adjacent neighborhoods. Also, sediment and surface water will be sampled in off-site drainage paths.

The Part II Quality Assurance Project Plan describes field collection and laboratory procedures that will be followed to ensure that samples yield data that accurately represents environmental conditions.

If you wish to comment on the plans, please submit your comments postmarked no later than JANUARY 13, 1986 to:

Therese Gioia
Remedial Project Manager (T-4-2)
U.S. Environmental Protection Agnecy
215 Fremont Street
San Francisco, CA 94105

Toll-free Information Service: (800) 231-3075

INFORMATION REPOSITORIES

Carson Public Library
Attn: Catherine O'Connell
151 East Carson Street
Carson, CA 90745
(213) 830-0901

Civic Center Library
Attn: Judy Harrington
3031 Torrance Boulevard
Torrance, CA 90503
(213) 618-5959

United States Environmental Protection Agency
Region 9
215 Fremont Street
San Francisco, CA 94105
Arizona
California
Nevada
Pacific Islands

EPA

Environmental News

MONTROSE CHEMICAL SITE: FINAL WORKPLAN

NOVEMBER, 1984

Attached for your review and information is a summary of the final remedial investigation/feasibility study (RI/FS) workplan for the Montrose Chemical Site in Torrance, California.

Copies of the complete final RI/FS workplan are available for public review at the following locations:

- Carson Public Library - Reference Desk
  151 E. Carson Street
  Carson, California 90745

- Civic Center Library - Reference Desk
  3031 Torrance Boulevard
  Torrance, California 90503

Any questions you may have should be addressed to:

Steve Drew
Community Relations Coordinator
U.S. EPA
215 Fremont Street
San Francisco, CA 94105

(415) 974-8026

Montrose Chemical's sampling results showed onsite soils containing 300-400 tons of DDT, with surface soils exceeding California's draft hazardous waste criteria by two to five orders of magnitude. Based on these results, EPA reevaluated the threat posed by the Montrose property and placed it on the proposed National Priority List Update #2. Due to extensive public comment and its status as a proposed Superfund site, the October 1984, Remedial Investigation/Feasibility Study Work Plan was prepared and will be implemented to ensure that remedial action is selected in accordance with federal Superfund program policies.

REMEDIAL INVESTIGATION

The purpose of remedial investigation is to characterize the type, degree, and location of chemical contamination of soil, air, surface water, and groundwater resulting from activities at the Montrose site. The investigation will consist of an information gathering phase and a two-part field sampling program and is expected to take 10 to 11 months to complete.

The Part I field program is limited to onsite soil and groundwater sampling. Soil samples will be tested for a large number of compounds to determine the nature of the contamination. Moreover, five monitoring wells will be installed and sampled to determine if contamination has reached groundwater. Following Part I, EPA and interested agencies will review the sample results and identify a list of "Target Chemicals." The Part II investigation will focus attention on these Target Chemicals known to be of concern on and off the Montrose site.

The objectives of the Part II field sampling are to provide more detailed data on Target Chemical concentrations onsite and to define the nature and location of offsite contamination. The offsite program will include:

- Surface water and soil/sediment samples along past and present drainage paths from the Montrose site to the Los Angeles Harbor.

- Sediment samples in sewers between the Montrose site and the Joint Water Pollution Control Plant located in the City of Carson.

- Soil samples in neighborhoods that may have been affected by aerial dispersion of DDT.

- Air samples from the site vicinity.

Before sampling programs begin, several written plans containing specific field and laboratory procedures will be prepared. The Health and Safety Plan will describe measures to protect sampling personnel and workers from increased chemical exposure during field investigation. A Quality Assurance Project Plan will be designed to ensure the reliability of all the environmental monitoring and measurement efforts made during the Remedial Investigation. Sampling plans for each program (soil, groundwater, air, and surface water) will detail sampling methods, define sampling locations, and discuss chemical analyses to be performed. These plans will be developed after reviewing existing sampling data from state and local agencies. Additional information relevant to offsite movement of contaminants such as aerial photographs, sewer plans, and environmental literature will also be reviewed in developing the sampling plans.

FEASIBILITY STUDY

When the Remedial Investigation has been completed, EPA will conduct a Feasibility Study to evaluate the possible cleanup options. Federal policy requires EPA to select a remedial action which is the most cost-effective (not necessarily the least expensive) cleanup option. Cleanup options are screened using effectiveness measures, including:

- Risk and effect of failure.
- Environmental impacts.
- Public health impacts.
- Ability to minimize community impacts during implementation.
- Time required to achieve cleanup.

The Feasibility Study Report is scheduled to be released for public comment in October, 1985. After considering community, state, and local agency response, EPA will select an appropriate remedial action.

11/30

THOMAS E. BAILEY
PROGRAM MANAGEMENT SECTION
TOXIC SUBSTANCES CONTROL DIVISION

TO: Joel Moskowitz ___
Rich Wilcoxon ___

Batham	___	Richards	___
Masterman	___	Phillippe	___
White	X		
McClenehan	___		

ACTION:

Review & Comment	___	Prepare Reply, My Signature	___
Information	X	Reply Direct	___
File	___	Reply Signature	___
Let's Discuss	___		
Appropriate Action	___		

COMMENTS: ___

BOE-C6-0178289

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95814

Mitigation

Sec.

C

Montrose

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

LOS ANGELES, CALIFORNIA 90005

January 9, 1978

PLEASE REPLY TO
P.O. BOX 147
TORRANCE, CA. 90507

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for October, 1977 covering analysis of our sewer effluent.

Yours very truly,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

BOE-C6-0178292

TABLE 1

Summary of DDT Data Reported by Montrose Chemical Corporation of its Wastewater Discharge (I.W. #1487) and Summary of Districts' Monitoring Data of Raw Sewage at the JWPCP

Month	Montrose Chemical Corporation's Data Reported In CPRs			Average DDT Received at JWPCP In Raw Sewage
	Flow	Total DDT Concentration	Total DDT Emission	
	gpd	μg/l	mg/day	gm/day
Apr. 1974	2700	< .5	< 5.1	2,300
July 1974	2700	< 5.	< 51.	7,600
Jan. 1975	2400	< 5.	< 45.	2,700
Mar. 1975	2400	8.	73.	1,900
June 1975	2480	< .5	< 4.7	3,700
Sept. 1975	2400	40.	363.	1,800
Jan. 1976	2480	<10.	< 94.	1,500
Apr. 1976	2500	90.	852.	2,000
July 1976	2400	< 5.	< 45.	8,200
Oct. 1976	2400	<10.	< 91.	2,200
Jan. 1977	2400	96.	872.	2,200
Apr. 1977	2400	< 5.	< 45.	2,400
July 1977	2400	< 5.	< 45.	2,200
Oct. 1977	2400	< 5.	< 45.	3,300
Jan. 1978	2400	< 2.	< 18.	2,200
Apr. 1978	2400	<20.	<182.	2,100
June 1978	2400	< 2.	< 18.	4,000
Sept. 1978	2400	< 2.	< 18.	3,200
Jan. 1979	2400	< 2.	< 18.	2,500
Apr. 1979	2400	< 2.	< 18.	2,400
July 1979	2400	< 2.	< 18.	2,900
Average	2441	<15.	<139.	3,000

Note: Data from Montrose Chemical are from one 24-hour composite taken during the listed month, actual date of sampling not identified; Districts' data are average of weekly composites for the entire corresponding month.

TABLE 2

Results of Sampling in Private Sewer Manhole Downstream of Montrose Chemical Corporation's Industrial and Sanitary Waste Discharges

Parameters	Sample Date					
	July 10, 1979	July 11, 1979	July 12, 1979	Aug. 14, 1979	Aug. 15, 1979	Average of Five Samples
Concentrations - µg/l						
op' - DDE	1.76	0.80	0.77	7.96	1.41	2.54
pp' - DDE	4.00	4.94	4.46	32.7	6.43	10.51
op' - DDD	2.70	3.48	3.35	15.7	1.85	5.42
pp' - DDD	8.58	11.3	10.9	51.5	5.33	17.52
op' - DDT	1.85	2.55	0.30	22.0	4.84	6.31
pp' - DDT	19.3	24.5	7.44	150.	23.6	44.97
Total of Above as DDT	38.2	47.6	27.2	280.	43.5	87.30
Composition Percentages - %						
DDE	16	12	19	15	18	15
DDD	30	31	52	24	16	26
DDT	54	57	29	16	66	59

3 2 0

BOE-C6-0178294

TABLE 3

Results of Sampling Montrose Chemical Corporation's
Industrial Waste Discharge
I.W. #1487

Parameters	Sample Dates Aug. 14, 1979	Sample Dates Aug. 15, 1979	Average of Two Samples
Concentrations - μg/l			
cp' - DDE	.85	.63	.74
pp' - DDE	5.26	2.86	4.06
op' - DDD	1.30	.76	1.03
pp' - DDD	3.02	1.84	2.43
op' - DDT	5.96	4.05	5.01
pp' - DDT	49.4	33.2	41.30
Total of Above as DDT	65.8	43.3	54.55
Composition Percentages - %			
DDE	9	8	9
DDD	7	6	6
DDT	84	86	85

FIGURE 1

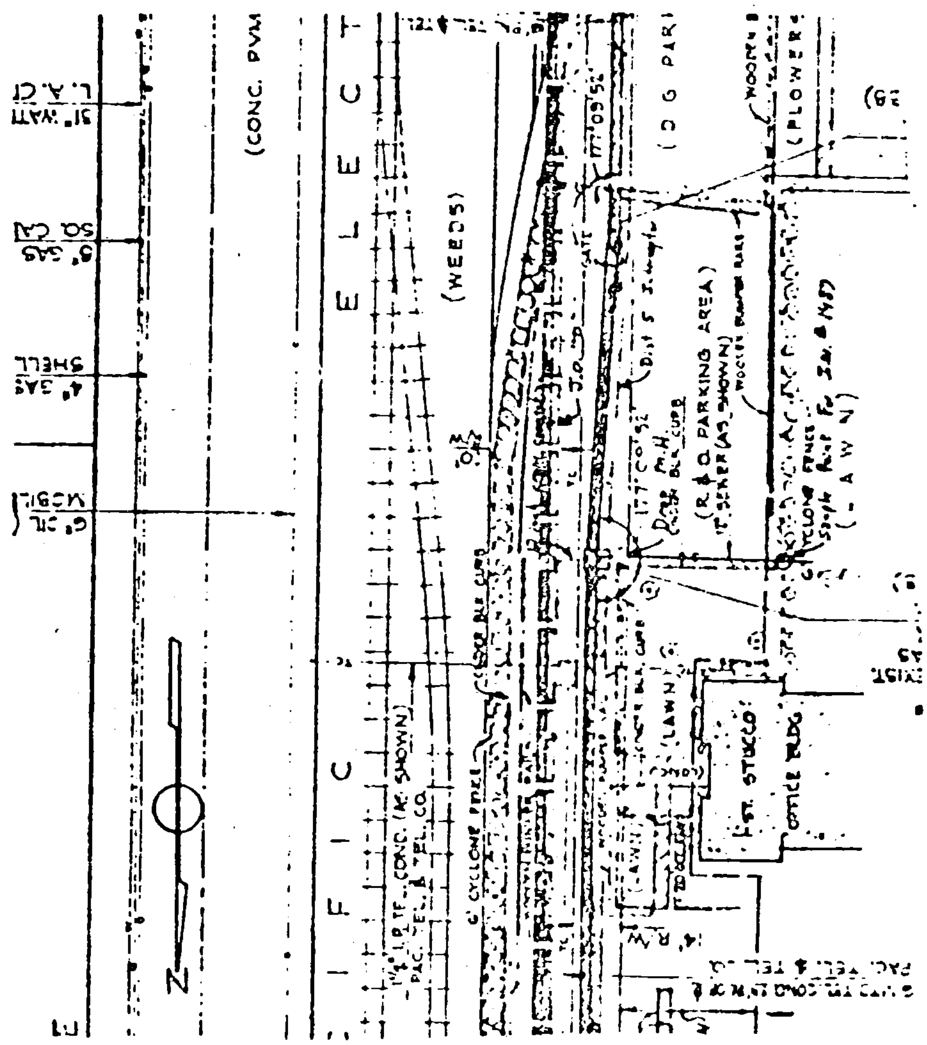
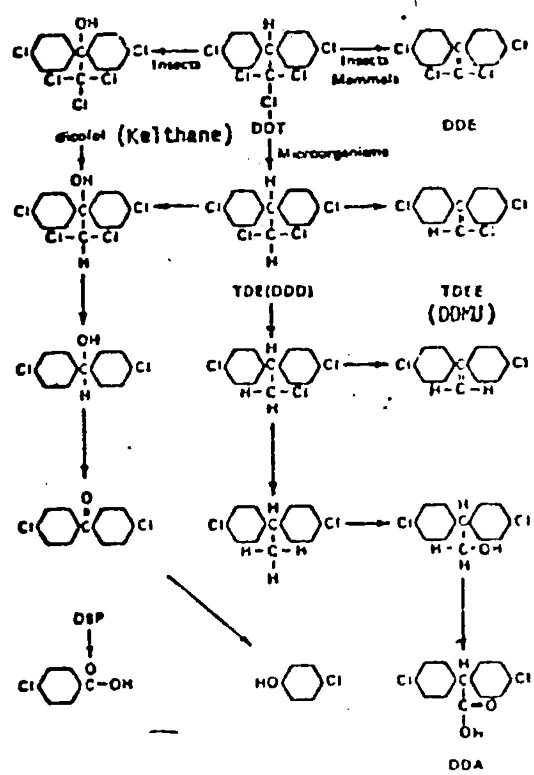


FIGURE 2

The metabolism of DDT by microorganisms. The metabolites DDE, TDE, TDEE, and DDA are all quite recalcitrant and accumulate in higher organisms. (After F. Matsumura and G. M. Boush in *Soil Biochemistry*, by A. D. McLaren and J. Skujins, Vol. 2, Marcel Dekker, Inc., N. Y., 1972.)



SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1487

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury Total			mg/l
C	COD			mg/l	X	Molybdenum Total			mg/l
D	SS (Suspended Solids)		9,970	mg/l	Y	Nickel Total			mg/l
E	pH		12.8	Units	Z	Selenium Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium Total			mg/l
H	Sulfide			mg/l	CC	Thallium Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin Total			mg/l
J	Fluoride			mg/l	EE	Titanium Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc Total			mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease Hexane Extract			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)			mg/l
P	Cadmium - Total			mg/l	KK	Pesticides Chlor. Hydrocarb.		<.005	mg/l
Q	Chromium - Total			mg/l	LL	Radioactivity Alpha, Beta & Gamma		<0.005	mg/l
R	Cobalt - Total			mg/l	MM	Temperature		90°C	Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate (S)			mg/l
U	Lead - Total			mg/l					

NON-CRITICAL PARAMETERS
(Report When Available)

OTHER PARAMETERS
(Report When Requested)

Ident Code	Parameter		Value		Ident Code	Parameter		Value
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Lithium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other [illegible] parameter known to be present in the wastewater. Those parameters required by the Districts [illegible] known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A [illegible] values must be determined using representative 24 hour composite samples by a State Certified or Districts Approved Laboratory. If values are obtained by estimate write E in this column. Estimated values are acceptable for new plants only.

(Print) BIO-TECHNICS LABORATORIES 1133 Crenshaw, Los Angeles 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. of Ca. 2879
Name of Company Having Wastewater Discharge SIC Number

(Print) 20201 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data [illegible] is a true and correct representation of the wastewater discharged from the stated discharge point.

Date 1/9/78 Location Torrance California

1-11-78
c/jm

X (Signed) Name

Plant Manager
Position (Administrative Officer of Company with Wastewater Discharge)

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

LOS ANGELES, CALIFORNIA 90005

August 15, 1977

PLEASE REPLY TO
P.O. BOX 147
TORRANCE, CA 90507

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for July, 1977 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

8/16/77

#1487

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		4598	mg/l	Y	Nickel - Total			mg/l
E	pH		11.9	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		1.51	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		<5	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated hydrocarbons (except pesticides)		<0.005	mg/l
P	Cadmium - Total			mg/l	KK	Pesticides (Chlor. Hydro.)		<0.005	mg/l
Q	Chromium - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
R	Cobalt - Total			mg/l	MM	Temperature		90°C	Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate's			mg/l
U	Lead - Total			mg/l					

	NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)		
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide		8/10/77	mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurement or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

(Print) BIO-TECHNICS LABORATORY INC. 1133 Crenshaw, Los Angeles 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. of Ca. 2879
Name of Company Having Wastewater Discharge SIC Number(s)

(Print) 20201 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharge from the stated discharge point.

Date 8/15/77 Location Torrance, California

(Signed) Name Plant Manager
Position (Administrative Officer of Company with Wastewater Discharge)

GM 2 2 6

BOE-C6-0178300

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

May 3, 1977

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles Co.
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for April, 1977 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

BOE-C6-0178301

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1487

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		2048	mg/l	Y	Nickel - Total			mg/l
E	pH		12.0	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.05	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		0.65	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<0.03	mg/l
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor. Hycarb.)		<0.005	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
S	Copper - Total			mg/l	MM	Temperature		90°C	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS (Report When Available)						OTHER PARAMETERS (Report When Requested)		
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

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93019

(Print) BIO-TECHNICS LABORATORY INC. 1133 Crenshaw Blvd., Los Angeles
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. 2879
Name of Company Having Wastewater Discharge — I.W. Number(s)

(Print) 20201 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharges from the stated discharge point.

Date 5/3/77 Location Torrance , California

1/1/77
[signature]

Plant Manager

(Signed) Name Position (Administrative Officer of Company with Wastewater Discharge)

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90607

February 17, 1977

#1487

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for January, 1977 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:11

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichelo

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gal/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		326	mg/l	Y	Nickel - Total			mg/l
E	pH		12.0	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		1.1	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		0.42	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<.001	mg/l
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor Hycarb)		0.096	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
S	Copper - Total			mg/l	MM	Temperature		90°C	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)			
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A5			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimates write E in this column. Estimated values are acceptable for new plants only.

(Print) Bio-Technics Laboratory Inc. 1133 Crenshaw Blvd., Los Angeles 90019
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corporation of Ca. 2879
Name of Company Having Wastewater Discharge SIC Number(s)

(Print) 20201 S. Normandie Ave., Torrance, California 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

2/22/77
ec/ [illegible]

Date 2/17/77 Location Torrance California

Signed: John L. Kallok / Plant Manager
Name Position (Administrative Officer of Company with Wastewater Discharge)

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

[illegible] Workman Mill Road / Whittier, California
[illegible] / P. O. Box 4998 Whittier, California 9060[illegible]
Telephone (213) 699 7411 / From Los Angeles (213) 685 52[illegible]

JOHN D. PARKHURST
Chief Engineer and General Manager

November 23, 1976

File: 05-00.05-00/76-1487

Montrose Chemical Corporation of California
P. O. Box 147
Torrance, California 90507

Subject: Required Critical Parameter Report(s) Under
Industrial Wastewater Discharge Permit No(s) 1487

Dear Sirs:

Your Industrial Wastewater Discharge Permit(s) was approved in the Districts' letter dated June 5, [illegible]. One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permits(s).

Your latest Critical Parameter Report(s) was received on Nov. 23, 1976. The Districts have reviewed this report and found that it is delinquent in the following areas:

☐ The parameters underlined in red must also be analyzed as required on the Frequency of Laboratory Analysis Form issued with your Permit(s).

☐ You are not in compliance with the Districts requirements for the submittal of Critical Parameter Reports. Please submit a Critical Parameter Report on the items specified in your permit approval within 30 days of this letter and according to the required frequency thereafter.

/X/ The Critical Parameter Report must be signed by a representative of your company.

☐ Other:

The above items must be completed and returned to the Sanitation Districts within 30 days of the date of this letter. If you have any questions regarding these requirements, please call the Districts' Industrial Waste Section at (213) 699-7411, extension 261.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager

By Jay G. Kremer
Jay G. Kremer
Head, Industrial Waste Section

JGK:DEA: lc

Encls.

#1487

11-23-76

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

POST OFFICE BOX 147

TORRANCE, CALIFORNIA 90507

November 22, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for October, 1976 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

Rc/ Milne

11-23-76

F 1487

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2400	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)		50	gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		298	mg/l	Y	Nickel - Total			mg/l
E	pH		12.4	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		<0.01	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		3.68	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		<0.05	mg/l
P	Cadmium - Total			mg/l	KK	Pesticides (Chlor Hydcarb)		<0.01	mg/l X
Q	Chromium - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
R	Cobalt - Total			mg/l	MM	Temperature		90°	Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate (S)			mg/l
U	Lead - Total			mg/l					

NON-CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)				
PP	Calcium			mg/l	A1				
QQ	Magnesium			mg/l	A2				
RR	Potassium			mg/l	A3				
SS	Barium			mg/l	A4				
TT	Nitrate			mg/l	A5				
UU	Chloride			mg/l	A6				
VV	Bromide			mg/l	A7				
WW	Sulfate			mg/l	A8				
XX	Phosphorus-Ortho			mg/l	A9				

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters [illegible] to be absent from the wastewater may be [illegible] by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analysis write A in this column. Analysis values must be determined using representative 24 hour composite samples [illegible] laboratory. If values are obtained by estimate, write E in this column. [illegible]

BIO-TECHNICS LABORATORY INC. 1133 Crenshaw Blvd., Los Angeles 90019

(Print) Name and Address of Laboratory Performing Analyses and/or Measurements

Montrose Chemical Corp. 2679

(Print) Name of Company Having Wastewater Discharge

20201 S. Normandie Ave., Torrance, California 90502

(Print) Address of Wastewater Discharge

(Print) Additional Location Data [illegible]

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date 11/22/76 Executed at Torrance, California

[illegible signature] Plant Manager

Signed Name Position/Authorization [illegible]

BOE-C6-0178308

87

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

August 26, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Subject: Critical Parameter Report for Industrial Wastewater Discharge Permit No. 1487

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for July, 1976 covering analysis of our sewer effluent. We are re-submitting this report on the approved County Sanitation Districts form as requested in your letter of August 19, 1976.

Yours very truly,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

BOE-C6-0178309

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1487

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)	A	2400	gals/day
B	Flow (Peak)	A	50	gals/min.
C	COD			mg/l
D	SS (Suspended Solids)	A	62	mg/l
E	pH	A	12.2	Units
F	Total Dissolved Solids			mg/l
G	Ammonia (N)			mg/l
H	Sulfide			mg/l
I	Cyanide	A	<0.05	mg/l
J	Fluoride			mg/l
K	Aluminum - Total			mg/l
L	Antimony - Total			mg/l
M	Arsenic - Total			mg/l
N	Beryllium - Total			mg/l
O	Boron - Total			mg/l
P	Cadmium - Total			mg/l
Q	Chromium - Total			mg/l
R	Cobalt - Total			mg/l
S	Copper - Total			mg/l
T	Iron - Total			mg/l
U	Lead - Total			mg/l

Ident. Code	PARAMETER 1/	2/	QUANTITY VALUES	
V	Manganese - Total			mg/l
W	Mercury - Total			mg/l
X	Molybdenum - Total			mg/l
Y	Nickel - Total			mg/l
Z	Selenium - Total			mg/l
AA	Silver - Total			mg/l
BB	Sodium - Total			mg/l
CC	Thallium - Total			mg/l
DD	Tin - Total			mg/l
EE	Titanium - Total			mg/l
FF	Zinc - Total	A	.21	mg/l
GG	Oil & Grease (Hexane Extract)			mg/l
HH	Phenols			mg/l
II	Surfactants (MBAS)			mg/l
JJ	Chlorinated Hydrocarbons (except pesticides)	A	.58	mg/l
KK	Pesticides (Chlor. Hycarb.)	A	<0.005	mg/l
LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
MM	Temperature	A	90°F	Degrees °F
NN	Color			Units
OO	Thiosulfate (S)			mg/l

NON-CRITICAL PARAMETERS
(Report When Available)

Code	Parameter			
PP	Calcium			mg/l
QQ	Magnesium			mg/l
RR	Potassium			mg/l
SS	Barium			mg/l
TT	Nitrate			mg/l
UU	Chloride			mg/l
VV	Bromide			mg/l
WW	Sulfate			mg/l
XX	Phosphorus Ortho			mg/l

OTHER PARAMETERS
(Report When Requested)

Code	Parameter		Quantity Values
A1			
A2			
A3			
A4			
A5			
A6			
A7			
A8			
A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but *known to be absent* from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined, using representative 24 hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. *Estimated values are acceptable for new plants only.*

BIO-TECHNICS LABORATORY INC. 1133 Cronshaw Blvd., Los Angeles 90019
(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

Montrose Chemical Corp. 2879
(Print) Name of Company Having Wastewater Discharge — I.C. Number(s)

20201 S. Normandie Ave., Torrance, California 90502
(Print) Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date 3/2/6_ Location Torrance, California

[signature] Plant Manager
Signature Name — Position (Administrative Officer of Company with Wastewater Discharge)

BOE-C6-0178310

COUNTY SANITATION DISTRICT
OF LOS ANGELES COUN

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607
Telephone (213) 699-7411 / From Los Angeles (213) 685-5217

August 19, 1976

File:05-00.05-00/76-1487

Montrose Chemical Corp. of Calif.
P. O. Box 147
Torrance, CA 90507

Subject: Required Critical Parameter Report(s) Under Industrial Wastewater Discharge Permit No(s) 1467

Dear Sirs:

Your Industrial Wastewater Discharge Permit(s) was approved in the Districts' letter dated June 5, 1974. One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permits(s).

Your latest Critical Parameter Report(s) was received on August 19, 19 The Districts have reviewed this report and found that it is delinquent in the following areas:

[ ] The parameters underlined in ... must also be analyzed as required on the Frequency of Laboratory Analysis Form issued with your Permit(s).

[ ] You are not in compliance wih the Districts requirements for the submittal of Critical Parameter Reports. Please submit a Critical Parameter Report on the items specified in your permit approval within 30 days of this letter and according to the required frequency therafter.

[ ] The Critical Parameter Report must be signed by a representative of your company.

[X] Other: Please submit Critical Parameter Reports on Di forms only. This is necessary to facilitate compute cessing. Please return the enclosed Critical Parame Report Form with the appropriatedata and signature.

[illegible] returned to the Sanitation [illegible] days of the date of this letter. If you have [illegible] these requirements, please call the Districts' [illegible] Waste Section at (213) [illegible], extension 261.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager

By [signature]
Jay G. Kremer
Head, Industrial Waste Section

JGK:DEA:ct

Encls.*

MONTROSE CHEMICAL CORPORATION OF CALIF

POST OFFICE BOX 147

TORRANCE, CALIFORNIA 90507

August 18, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for July, 1976 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

BOE-C6-0178313

M[illegible]rose Chemical Corporation of California
2[illegible] S. Normandie Avenue
T[illegible]rrance, California 90507

Test Report No.: 1-5-4183
Date Received: 7-7-76
Date Initiated: 7-8-76
Date Completed: 8-11-76

Attn: Guy A. Dimichele, Supt. Engineering & Maintenance

Specimen Description: One (1) one-liter amber glass bottle filled with a water sample and labeled: 7-7-76, Sewer Sample.

Type of Examination: CHEMICAL ASSAYS

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 197[illegible] and Methods for the Chemical Analysis of Water and Wastes, U.S. Environmental Protection Agency, 1974.

Results:

Analyte	B.T. Procedure No.	Parts Per Million (mg/l)
Suspended Solids	5-1-031-71	62
pH	5-1-026-71	12.2
Cyanide	5-1-072-71	< 0.05
Zinc	5-1-063-75	0.21
Chlorinated Hydrocarbons	5-4-010-73	0.58
Pesticides	5-4-002-71	< 0.005

Examination by: Daniel T. Earl
Daniel T. Earl, B.S., Chemist

Approved by: R. T. Lottr[illegible]
R. T. Lott[illegible], B.S., Chief Chemist 8-12-76

VJP

The conclusions [illegible] herein apply only to the items tested and are not indicative of the quality or condition of apparently identical or similar products. This report is submitted for the exclusive use of the addressee. No use or mention of our name or the name of any member of our staff may be made in connection with any form of advertising or other public announcement without written authorization by an officer of B. C. TECHNICS LABORATORIES INC.

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

5-11

May 10, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our revised "Critical Parameter Report" for April 1976. As requested, we have transferred the data from our report submitted on May 4, 1976 to the approved Sanitation Districts of Los Angeles County Industrial Wastewater Critical Parameter Report Form.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

Chris / Martin

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

SW 1487

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES		Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	
A	Flow (Total)		2500	gals/day	V	Manganese - Total			mg/l
B	Flow (Peak)			gals/min.	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)		4	mg/l	Y	Nickel - Total			mg/l
E	pH		11.8	Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide		0.04	mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total		0.7	mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane Extract)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)			
P	Cadmium - Total			mg/l					
Q	Chromium - Total			mg/l	KK	Pesticides (Chlor. Hydrocarb.)		<0.01	mg/l
R	Cobalt - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)		0.09	mg/l pCi/l
S	Copper - Total			mg/l	MM	Temperature		90	Degrees °F
T	Iron - Total			mg/l	NN	Color			Units
U	Lead - Total			mg/l	OO	Thiosulfate (S)			mg/l

Ident Code	NON-CRITICAL PARAMETERS (Report When Available)				Ident Code	OTHER PARAMETERS (Report When Requested)		
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l	A6			
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analysis values must be determined using representative 24-hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. *Estimated values are acceptable for new plants only.*

(Print) Bio-Technics Laboratory, Inc.
Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Montrose Chemical Corp. of Ca. 2879
Name of Company Having Wastewater Discharge (SIC Number(s))

(Print) 20201 S. Normandie Ave., Torrance Ca. 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date May 11, 1976 Location Torrance, California California 90502

Signature John L. Kallock Name Plant Manager
Position (Administrative Officer of Company with Wastewater Discharge)

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

... Road / Whittier, California
Mailing Address: P.O. Box 4998, Whittier, California 9060...
Telephone (213) 699-7411 / From Los Angeles (213) 685-5217

JOHN D. PARKHURST
Chief Engineer and General Manager

May 7, 1976

File: 05-00.05-00/75-1487

Montrose Chemical Corp. of Calif.
P.O. Box 147
Torrance, CA 90507

Subject: Required Critical Parameter Report(s) Under
Industrial Wastewater Discharge Permit No(s) 1487

Dear Sirs:

Your Industrial Wastewater Discharge Permit(s) was approved in the Districts' letter dated June 5, 1974 . One of the requirements specified in the approval was the submittal of Critical Parameter (chemical analysis) Reports to the Districts according to the Frequency of Laboratory Analysis Form issued with the Permit(s).

Your latest Critical Parameter Report(s) was received on May 5, 1976. The Districts have reviewed this report and found that it is delinquent in the following areas:

☐ The parameters underlined in red must also be analyzed per the Frequency of Laboratory Analysis Form issued with your permit(s).

☐ The chemical analyses were not performed by a State approved laboratory and your company laboratory has not been approved by the Sanitation Districts for performing these tests. The analyses must be redone by a laboratory that is State approved. Enclosed is a list of State approved laboratories in your area. If you desire to obtain Districts' approval for your company laboratory to perform these analyses, please contact Ray Stewart at the Districts' San Jose Creek Water Quality Lab at (213) 699-0405.

☐ The Critical Parameter Report must be signed by a representative of your company.

☒ Other: Please submit Critical Parameter Reports on Districts forms only. This is necessary to facilitate computor processing. Please return the enclosed Critical Parmeter Report Form with the appropriate data and signature.

The above items must be completed and returned to the Sanitation Districts within 30 days of the date of this letter. If you have any questions regarding these requirements, please call the Districts' Industrial Waste Section at [illegible] 699-7411, extension 251.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager

By Jay G. Kremer
Jay G. Kremer
Head, Industrial Waste Section

JGK:DEA:ct

Encls.

Jw 487

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

POST OFFICE BOX 117
TORRANCE, CALIFORNIA 90507

5-5-76
05

May 4, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for April, 1976 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure

cc: Samuel Rotrosen
Max Sobelman
Guy A. Dimichele

Corporation

Texas 90507

Attn: Mr. Guy Dumichel

Test Report No. 1-5-6239
Date Received: 3-31-76
Date Initiated: 3-31-76
Date Completed: 4-19-76

Specimen Description: One (1) amber glass bottle, filled with a water sample, labeled: Sewer Sample, 3/31/76.

Type of Examination: CHEMICAL ASSAYS

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971.

Results:

Analyte	BTP No.	Parts per Million (mg/l)
Flow (total)	-	2500 gal/day
Suspended Solids	5-1-031-71	4
pH	5-1-026-71	11.8
Cyanide	5-1-072-71	0.04
Zinc	5-1-063-75	0.7
Chlorinated Hydrocarbons	5-4-010-73	< 0.01
Pesticides	5-4-002-71	0.09
Temperatue (°F)	-	90

Examination by: *Daniel T. Earl*
Daniel T. Earl, B.S., Chemist

Approved by: *Bong Ja Lee*
Bong Ja Lee, M.S., Chemist 4-28-76
Chemistry Team Leader

jb

MCASA

Martin / Jim / Chris

CHEMICAL CORPORATION OF CALIFORN

TORRANCE, CALIFORNIA 90507

February 13, 1976

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles Co.
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for January, 1976, covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

Enclosure
cc: Samuel Rotrosen
Max Sobelman

... Chemical Corp of Calif.
... Normandie Ave.
... e, Calif. 90507

Attn: Guy Di Michelle

Test Report No. 1-5-3625
Date Received: 1/7/76
Date Initiated: 1/12/75
Date Completed: 1/27/76

Specimen Description: Two (2) half-gallon amber glass bottles with gummed Montrose labels each reading "January 7, 1976, 0830, Sewer Sample."

Type of Examination: CHEMICAL ASSAYS

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971.

Results:

Analyte	BT Procedure No.	Parts per million (mg/l)
Flow (Total)	-	2480 gal/day
Suspended Solids	5-1-031-71	120
pH	5-1-026-71	11.6
Cyanide	5-1-072-71	< 0.001
Zinc	5-1-063-75	0.5
Chlorinated Hydrocarbons	5-4-010-73	< 0.008
Pesticides	5-4-002-71	< 0.01
Temperature (°F)	-	91

Examination by: Daniel T. Earl
Daniel T. Earl, B.S., Chemist

Approved by: Bong Ja Lee for RTZ
Bong Ja Lee, M.S., Chemist 2/2/76
Chemistry Team Leader

em

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

POST OFFICE BOX [illegible]

TORRANCE, CALIFORNIA 90507

November [illegible]

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles Co.
P.O. Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for September, 1975, covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:ll

cc: Samuel Rotrosen
Max Sobelman

Enclosure

[illegible] Martin / [illegible]

Please [illegible] $ 1487

[illegible] problem to get [illegible]

[illegible]

Montrose Chemical Corporation of Calif.
20201 S. Normandie Ave.
Torrance, Calif. 90507

Attn. Mr. B. Bratter, DDT Plant Superintendent

Test Report No. 1-5-3273
Date Received: 9/26/75
Date Initiated 9/26/75
Date Completed: 10/21/75

Specimen Description: One (1) Wastewater Sample labeled Water to Sewer, SIC No. 2879

Type of Examintion: CHEMICAL ASSAY

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971

Results:

Analyte	BT Procedure No.	Results in ppm (mg/l)
1) Flow (gal/day)	-	2400
2) Suspended Solids	5-1-031-69	2832
3) pH	5-1-026-69	10.09
4) Cyanide	5-1-072-71	0.0001
5) Zinc	5-1-063-71	.023
6) Chlorinated Hydrocarbons	5-4-010-70	<.005
7) Pesticides	5-4-002-71	0.04
8) Temperature (°F)	-	90

Examination by Daniel T. Earl
Daniel T. Earl, B.S., Chemist

Approved by: R. T. Lottritz
R.T. Lottritz, B.S.,
Chief Chemist

en.

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MONTROSE CHEMICAL CORPORATION OF CALIFORNIA

POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

July 23, 1975

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles Co.
P.O Box 4998
Whittier, California 90607

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for June, 1975, covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok

John L. Kallok
Plant Manager

JLK:la

cc: Samuel Rotrosen
Max Sobelman

Enclosure

Montrose Chemical Corporation of California
20201 S. Normandie Avenue
Torrance, California 90502

Attn: Mr. Bernard Bratter

Test Report No. 1-5-2891
Date Received: 6-26-75
Date Initiated: 6-26-75
Date Completed: 7-11-75

Sample Description: Two (2) sewer water samples, Industrial Waste Water Discharge permit #1427, SIC #2879, Dated 6-26-75.

Type of Examination: CHEMICAL ASSAYS

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971.

Results:

Analyte	BT Procedure No.	Results in Parts per Million (mg/l)
1. Total Flow	-	2480 gals/day
2. Suspended Solids	5-1-031-69	88
3. pH	5-1-026-69	12
4. Cyanide	5-1-072-71	0.05
5. Zinc	5-1-063-70	1
6. Chlorinated Hydrocarbons	5-4-010-70	0.008
7. Pesticides	5-4-002-71	< 0.0005
8. Temperature	-	90°F
9. Peak flow		50° GPM

Examination by: C. H. Huang
C.H. Huang, M.S., Chemist

Approved by: R. T. Lottritz
R.T. Lottritz, B.S., Chief Chemist 7-17-75

nr

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX 147
TORRANCE, CALIFORNIA 90507

May 12, 1975

Mr. Jay G. Kremmer
Head, Industrial Waste Section
County Sanitation Districts of Los Angeles Co.
P.O Box 4998
Whittier, California 90607

File: 5-00.05-00/74 — 1487

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for March, 1975 covering analysis of our sewer effluent.

Yours very truly,

John L. Kallok
Plant Manager

JLK:la

cc: Samuel Rotrosen
Max Sobelman

Enclosure

1W - 1487

Montrose Chemical Corporation of California
20201 S. Normandie Ave.
Torrance, California 90507

Test Report No. 1-5-2416
Date Received: 3-27-75
Date Initiated: 3-27-75
Date Completed: 4-16-75

Attn: Mr. B. Bratter

Sample Description: One (1) water sample (sewer), taken 3-27-75 at 8:30 A.M..

Type of Examination: Assay for Suspended Solids, pH, Cyanide, Zinc, Pesticides (Chlorinated Hydrocarbons), Temperature.

Reference: Standard Methods for Examination of Water and Wastewater, 13th Edition.

Results:

	Analytes	BT Procedure No.	Results in Parts Per Million (mg/l)
1.	Flow (Total)		2400 gals/day
2.	Flow (Peak)		50 gals/day
3.	Suspended Solids	5-1-031-69	124
4.	Cyanide	5-1-072-71	20.5
5.	Zinc (Total)	5-1-053-70	11.7
6.	Pesticides (Chlorinated Hydrocarbons)	5-4-010-70	0.008 (p.p. DDT) ?
7.	pH	5-1-026-69	9.7
8.	Temperature		90°C.

Examination by: C. H Huang
C.H. Huang, M.S., Chemist

Approved by: R. T. Lottritz
R.T. Lottritz, B.S., Chief Chemist 4-21-75

kk

COUNTY SANITATION DISTRICTS
OF [illegible] COUNTY

[illegible]

September [illegible], 197[illegible]

[illegible]

[illegible] Chemical Corp.
[illegible] S. [illegible]
[illegible], California 90507

Attention: John L. Kallok

Subject: Industrial Wastewater Discharge Permit No. [illegible]

Dear Mr. Kallok:

[illegible] review of your recently submitted Critical [illegible] Report [illegible] and previously approved plans and data, indicates that [illegible] requirements for analyses should be [illegible] as shown [illegible] the enclosed Required Frequency of Laboratory Analyses Form and Critical Parameter Report Form.

If you have any questions regarding these requirements, please contact the Sanitation Districts' Industrial Waste Section.

Your continued cooperation in this matter is appreciated.

Very truly yours,

[illegible]

[illegible] Industrial Waste Section

[illegible]
cc: City of Torrance
[illegible] Torrance Blvd.
Torrance, Ca. 90503
Attn: M. Glen [illegible]

[illegible]

[illegible] 6-5-71

[illegible], Calif. [illegible]

[illegible] to the [illegible] Report Form:

Parameter	Industrial Wastewater [illegible] 1/	Industrial Wastewater Characterization 2/ Analyses
Flow (Total)		1 per 3 months
[illegible]		
[illegible]		
Suspended Solids		1 per 3 months
pH		1 per 3 months
Cyanide		1 per 3 months
[illegible]		1 per [illegible]
[illegible]		1 per [illegible]
[illegible]		1 per 3 [illegible]
[illegible]		[illegible]

[illegible] with the industrial [illegible]

[illegible] analysis data [illegible] required [illegible] and July [illegible] data on [illegible] wastewater [illegible] the required [illegible] the [illegible] of

BOE-C6-0178330

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

#1497

Code	Parameter [1]	2/	Quantity Values		Code	Parameter [1]	2/	Quantity Values	
A	Flow (Avg)			gal/day	V	Manganese - Total			mg/l
B	Flow (Peak)			gal/min	W	Mercury - Total			mg/l
C	COD			mg/l	X	Molybdenum - Total			mg/l
D	SS (Suspended Solids)			mg/l	Y	Nickel - Total			mg/l
E	pH			Units	Z	Selenium - Total			mg/l
F	Total Dissolved Solids			mg/l	AA	Silver - Total			mg/l
G	Ammonia (N)			mg/l	BB	Sodium - Total			mg/l
H	Sulfide			mg/l	CC	Thallium - Total			mg/l
I	Cyanide			mg/l	DD	Tin - Total			mg/l
J	Fluoride			mg/l	EE	Titanium - Total			mg/l
K	Aluminum - Total			mg/l	FF	Zinc - Total			mg/l
L	Antimony - Total			mg/l	GG	Oil & Grease (Hexane)			mg/l
M	Arsenic - Total			mg/l	HH	Phenols			mg/l
N	Beryllium - Total			mg/l	II	Surfactants (MBAS)			mg/l
O	Boron - Total			mg/l	JJ	Chlorinated Hydrocarbons (Excluding Pesticides)			mg/l
P	Cadmium - Total			mg/l	KK	Pesticides (Chlorinated)			mg/l
Q	Chromium - Total			mg/l	LL	Radioactivity (Alpha, Beta & Gamma)			pCi/l
R	Cobalt - Total			mg/l	MM	Temperature			Degrees °F
S	Copper - Total			mg/l	NN	Color			Units
T	Iron - Total			mg/l	OO	Thiosulfate (S)			mg/l
U	Lead - Total			mg/l					

NON CRITICAL PARAMETERS (Report When Available)					OTHER PARAMETERS (Report When Requested)			
PP	Calcium			mg/l	A1			
QQ	Magnesium			mg/l	A2			
RR	Potassium			mg/l	A3			
SS	Barium			mg/l	A4			
TT	Nitrate			mg/l	A5			
UU	Chloride			mg/l				
VV	Bromide			mg/l	A7			
WW	Sulfate			mg/l	A8			
XX	Phosphorus-Ortho			mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be in the wastewater. Those parameters required by the Districts [illegible] from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A [illegible] representative 24 hour composite samples [illegible]. If values are obtained by estimate, write E in this column. Estimated values are acceptable for flow values only.

(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) Name of Company Having Wastewater Discharge — Std. Number

(Print) Address of Wastewater Discharge

(Print) [illegible] Location Data [illegible]

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true [illegible] of the wastewater discharged from the stated discharge point.

Date ______ Location ______ California ______

(Signed) ______ (Name) ______ (Title) (Authorized Representative of Company with Wastewater Discharge)

1487

MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
POST OFFICE BOX [illegible]
TORRANCE, CALIFORNIA [illegible]

August 1, 1974

Mr. Jay G. Kremmer
Head, Industrial [illegible] Section
County [illegible] Districts of Los Angeles Co.
P.O. Box [illegible]
Whittier, California 90607

File: 5-00.05-00/74

Dear Mr. Kremmer:

Please find enclosed our "Critical Parameter Report" for July, 1974 covering analysis of our sewer effluent.

Very truly yours,

John L. Kallok
Plant Manager

JLK:la

Enclosure

cc: Samuel Rotrosen
Max Sobelman

[illegible] BIO-TECHNICS LABORATORIES, INC.

Test Report No. 1-5-1019
Date Received: 6/19/74
Date Initiated: 6/22/74
Date Completed: 7/5/74
P.O. Number 186-9332

Attn: Mr. [illegible]

Sample: One (1) gallon wastewater, 24 hour [illegible] composite taken 8:00 A.M. 6/12/74 to 8:00 A.M. 6/13/74 by Montrose Chemical personnel.

[illegible]

Reference: Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971.

Results:

Analyte	BT Procedure No.	Parts per Million (mg/l)	
1. Flow (total)	-	2700	gals/day
2. Flow (peak)	-	50	gals/min.
3. COD	5-1-046-70	551	
4. Suspended Solids	5-1-031-69	1300	
5. pH	5-1-030-69	12.3	
6. Sulfide	5-1-078-71	< 0.005	
7. Cyanide	5-1-072-71	4.50	
8. Fluoride	5-1-016-69	0.26	
9. Arsenic (total)	5-1-043-70	< 0.01	
10. Cadmium (total)	5-1-059-70	< 0.005	
11. Chromium (total)	5-1-011-69	< 0.005	
12. Copper (total)	5-1-064-71	< 0.005	
13. Iron (total)	5-1-019-69	2.4	
14. Lead (total)	5-1-057-70	< 0.005	
15. Manganese (total)	5-1-036-70	< 0.01	
16. Mercury	5-1-050-70	0.004	
17. Nickel	5-1-071-70	< 0.05	
18. Zinc (total)	5-1-063-70	13.0	
19. Oil & Grease	5-1-023-70	17.5	
20. Phenols	5-1-025-69	0.25	
21. Chlorinated Hydrocarbons	5-1-010-73	< 0.005	
22. Pesticides	5-4-002-71	< 0.005	
23. Temperature	-	95°F	

Examination by: [signature]
Chuan-Shan [illegible], M.S., Chemist

Approved by: R. T. [signature]
R.T. Lottritz, B.S., Chief Chemist 7/31/74

XXX
COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

... Whittier, California 90601
... P.O. Box 4998, Whittier, California 90607
... (213) 699 7411 / From Los Angeles (213) 685 5217

JOHN D. PARKHURST
Chief Engineer and General Manager

June 5, 1974

File: 5-00.05-00/74

City of Los Angeles
200 N. Spring St.
Room 543
Los Angeles, California 90012

Attention: Mr. Jack M. Betz

Subject: Industrial Wastewater Discharge Permit No. 1487
Montrose Chemical Corp. of Calif.
20201 S. Normandie Ave.
Torrance, Ca. 90507

Dear Mr. Betz:

Enclosed are four (4) approved sets of plans and copies of the approved Industrial Wastewater Discharge Permit for the proposed industrial waste discharge from subject company. Plans consist of:

Critical Parameter Report Form, laboratory analysis, description of waste disposal system, drawings: sewer system and plot plan.

Approval of the plans and permit is contingent upon continuing compliance with applicable Ordinance requirements, /__/ upon corrections shown in red on the drawings, /XX/ upon the following specific requirements:

1. Montrose Chemical Corp. of Calif. is advised that additional wastewater pretreatment facilities may be required to meet the proposed industrial effluent limits, enclosed.

2. This permit is approved for the discharge of boiler blowdown and water softener backwash water only, through an existing connection to the public sewer. Montrose Chemical Corp. of Calif. is prohibited from discharging any process wastes or other wastewater which may contain chlorinated pesticides' their derivatives, or intermediates in their manufacture. Any violation of this requirement may result in revocation of this permit to discharge to the public sewer or in other penalties prescribed in the Sanitation Districts' Ordinance.

3. Tests for Critical Parameters must be performed and reported to the Sanitation *** Districts on the enclosed Critical Parameter Report Form at the intervals **** indicated on the enclosed Required Frequency of Laboratory Analyses Form. Analyses shall be performed by a state certified laboratory or by a company laboratory approved by the Sanitation Districts.

Very truly yours,

John D. Parkhurst
Chief Engineer and
General Manager

By Jay D. Kremer
Jay D. Kremer
Head, Industrial Waste Section

JGK:BSB:se
cc: Montrose Chemical Corp. of Calif.
500 S. Virgil
Los Angeles, Ca. 90005
Attn: John L. Kallok

Encls. *, **, ***, ****

SANITATION DISTRICTS OF LOS ANGELES COUNTY

INDUSTRIAL WASTE SECTION

REQUIRED FREQUENCY OF LABORATORY ANALYSES

Company Name: Montrose Chemical Corp. of California Date: June 5, 1974

Address of Property Producing Wastewater Discharge: 20201 S. Normandie Ave. Torrance, Ca. 90507

Industrial Wastewater Discharge Permit No. 1487

SIC No. 2879

Estimated Annual Wastewater Flow Volume 845,000 gallons

The following test data shall be reported at the indicated frequencies to the Sanitation Districts on the Districts' Critical Parameter Report Form:

Test Ident. Code.	Test Parameter	Minimum Frequency Required For: Industrial Wastewater Treatment Surcharge Statement Analyses 1/	Minimum Frequency Required For: Industrial Wastewater Characterization Analyses 2/
A	Flow (Total)		1 per 6 months
B	Flow (Peak)		1 per 6 months
C	COD		1 per 6 months
D	Suspended Solids		1 per 6 months
E	pH		1 per 6 months
H	Sulfide		1 per 6 months
I	Cyanide		1 per 6 months
[illegible]	Flouride		1 per 6 months
[illegible]	Arsenic-Total		1 per 6 months
P	Cadmium-Total		1 per 6 months
Q	Chromium-Total		1 per 6 months
S	Copper-Total		1 per 6 months
T	Iron-Total		1 per 6 months
U	Lead-Total		1 per 6 months
V	Manganese-Total		1 per 6 months
W	Mercury-Total		1 per 6 months
Y	Nickel-Total		1 per 6 months
FF	Zinc-Total		1 per 6 months
GG	Oil & Grease		1 per 6 months
HH	Phenols		1 per 6 months
JJ	Chlor. Hydrocarb		1 per 3 months
KK	Pesticides		1 per 3 months
[illegible]	Temperature		1 per 6 months

1/ These analysis data shall be submitted annually with the industrial wastewater treatment surcharge statement.

2/ Industries required to submit only annual characterization analysis data should submit it directly to the Districts on July 1; industries required to submit data every 6 months should submit data on January 1 and July 1; industries required to submit data every 3 months should submit data on January 1, April 1, July 1, and October 1. Required industrial wastewater characterization analysis data not received within 45 days of the required date will be considered delinquent and a possible cause for revocation of the Industrial Wastewater Discharge Permit.

SANITATION DISTRICTS OF LOS ANGELES COUNTY
INDUSTRIAL WASTEWATER
CRITICAL PARAMETER REPORT FORM

Ident Code	PARAMETER 1/	2/	QUANTITY VALUES	Ident Code	PARAMETER 1/	2/	QUANTITY VALUES
A	Flow (Total)		gals/day	V	Manganese - Total		mg/l
B	Flow (Peak)		gals/min.	W	Mercury - Total		mg/l
C	COD		mg/l	X	Molybdenum - Total		mg/l
D	SS (Suspended Solids)		mg/l	Y	Nickel - Total		mg/l
E	pH		Units	Z	Selenium - Total		mg/l
F	Total Dissolved Solids		mg/l	AA	Silver - Total		mg/l
G	Ammonia (N)		mg/l	BB	Sodium - Total		mg/l
H	Sulfide		mg/l	CC	Thallium - Total		mg/l
I	Cyanide		mg/l	DD	Tin - Total		mg/l
J	Fluoride		mg/l	EE	Titanium - Total		mg/l
K	Aluminum - Total		mg/l	FF	Zinc - Total		mg/l
L	Antimony - Total		mg/l	GG	Oil & Grease (Hexane Extract)		mg/l
M	Arsenic - Total		mg/l	HH	Phenols		mg/l
N	Beryllium - Total		mg/l	II	Surfactants (MBAS)		mg/l
O	Boron - Total		mg/l	JJ	Chlorinated Hydrocarbons (except pesticides)		mg/l
P	Cadmium - Total		mg/l	KK	Pesticides (Chlorinated Hydrocarb.)		mg/l
Q	Chromium - Total		mg/l	LL	Radioactivity (Alpha, Beta & Gamma)		pCi/l
R	Cobalt - Total		mg/l	MM	Temperature		Degrees °F
S	Copper - Total		mg/l	NN	Color		Units
T	Iron - Total		mg/l	OO	Thiosulfate (S)		mg/l
U	Lead - Total		mg/l				

NON-CRITICAL PARAMETERS (Report When Available)				OTHER PARAMETERS (Report When Requested)			
PP	Calcium		mg/l	A1			
QQ	Magnesium		mg/l	A2			
RR	Potassium		mg/l	A3			
SS	Barium		mg/l	A4			
TT	Nitrate		mg/l	A5			
UU	Chloride		mg/l	A6			
VV	Bromide		mg/l	A7			
WW	Sulfate		mg/l	A8			
XX	Phosphorus Ortho		mg/l	A9			

NOTES 1/ Report all critical parameters required by the Sanitation Districts and any other critical parameter known to be present in the wastewater. Those parameters required by the Districts but known to be absent from the wastewater may be reported by placing the word absent in the appropriate space.

2/ If values are obtained by measurements or analyses write A in this column. Analytical values must be determined, using representative 24 hour composite samples, by a State Certified or Districts Approved Laboratory. If values are obtained by estimate, write E in this column. Estimated values are acceptable for new plants only.

(Print) Name and Address of Laboratory Performing Analyses and Flow Measurements

(Print) MONTROSE CHEMICAL CORP OF CALIF. — 2829
Name of Company Having Wastewater Discharge — SIC Number(s)

(Print) 20201 S NORMANDIE A., TORRANCE, CA. 90502
Address of Wastewater Discharge

(Print) Additional Location Data (Data above should be for only one discharge point to the sewerage system)

Statement of Accuracy of Data

I hereby affirm that the above data comprise a true and correct representation of the wastewater discharged from the stated discharge point.

Date ________ Location ________ California ________

Signed ________ Name ________ Position (Administrative Official of Company with Wastewater Discharge)

... 1787   CSD NO. 05   TREATMENT PLANT J.W.P.C.P.

FORM APPROVED
OMB No. 158-R0100

FOR AGENCY USE

STANDARD FORM A–MUNICIPAL

SECTION IV. INDUSTRIAL WASTE CONTRIBUTION TO MUNICIPAL SYSTEM

Submit a description of each major industrial facility discharging to the municipal system, using a separate Section IV for each facility description. Indicate the 4 digit Standard Industrial Classification (SIC) Code for the industry, the major product or raw material, the flow (in thousand gallons per day), and the characteristics of the wastewater discharged from the industrial facility into the municipal system. Consult Table III for standard measures of products or raw materials. (see instructions)

1. Major Contributing Facility (see instructions)

Name	401a	Montrose Chemical Corp. of Calif.
Number & Street	401b	20201 S. Normandie Avenue
City	401c	~~Los Angeles~~ Torrance
County	401d	Los Angeles
State	401e	California
Zip Code	401f	90507

2. Primary Standard Industrial Classification Code (see instructions) — 402: 2879

3. Principal Product or Raw Material (see instructions)

				Quantity		Units (See Table III)
Product	403a	DDT	403c	180,000	403e	lb/day
Raw Material	403b	Monochlorbenzene,	403d	140,000	403f	lb/day
		Chloral Oleum Caustic Soda		202,000		lb/day

4. Flow Indicate the volume of water discharged into the municipal system in thousand gallons per day and whether this discharge is intermittent or continuous.
   - 404a: 3 thousand gallons per day
   - 404b: [X] Intermittent (int) [ ] Continuous (con)

5. Pretreatment Provided Indicate if pretreatment is provided prior to entering the municipal system — 405: [ ] Yes [X] No

6. Characteristics of Wastewater (see instructions)

	Parameter Name	COD	SS	Cyanide	Zinc Total			
406a	Parameter Number	00340	00530	00720	01092			
406b	Value	401	1500	[illegible].0	32			

BOE-C6-0178338

FLAG EVALUATION FORM

S/C NO. 1679 | CSD 15 | SEWER NO. | DATE RECEIVED | TROS. NO. 58 E

AGENCY: CITY OF LOS ANGELES

COMPANY AND LOCATION

CONTROSE CHEMICAL CO. OF CALIF.
20201 S. NORMANDIE AVE
TORRANCE CA 90502
735 003 010

CONTACT
MR. L. KALLOCK | PHONE NO. (213) 323-6969

DESCRIPTION OF FACILITY
CHEMICAL PROCESSOR

DATE	TO	STATUS/REMARKS	INITIAL
74	BSB	FOR REVIEW / CLASS 2 - CRITICAL MASTER FILE - OK SURCHARGE LIST - OK INSPECTION REPORT [illegible] [illegible]	
/14		CPRF. Analysis Follow-up by BSB on DEC 9, 1974	DEA

TRANSMITTAL DATE

FOLLOW-UP DATE

Please keep this with inspection file

J. Chu May 31, 1974

0.005 MGD × 8.34 × 0.234 ~~= 0.00 58.8~~ = 0.006 lbs/day

COUNTY SANITATION DISTRICTS OF LOS ANGELES

ANALYTICAL REQUEST FORM

[illegible]

DATE 5-30-74

SAMPLE IDENTIFICATION				TESTS						
NAME OF PLANT or LOCATION	TYPE	DATE	JOB NO.	pH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NOTES or COMMENTS
...ntrose Chem.	[illegible]	5-8-74	[illegible]1620	9.65	380	4.33	0.234			
...matic Plating	"	5-24-74	[illegible]1786	9.40				10.4	76.0	
... Voight	"	"	[illegible]1787	10.5				2.6	31.2	
...ic Plating	"	"	[illegible]1789	9.0				22.8	28.8	
...al Precision	"	"	[illegible]1790	10.1				10.8	184.-	

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

Industrial Wastes from Various Companies in the Pomona Area

Grab Samples

May 26, 1971

Chlorinated Hydrocarbon Analysis

APE-WO: 330

Requested by: J. Kremer
Copy: J. Redner
K. Payne

SAMPLE DESCRIPTION / CONSTITUENT in µg/liter	Northwest Paper Company	Garden State Paper Company	Hollytex Carpet Mills	Walter Carpet Mill
op' - DDE	0.[illegible]	ND	0.395	0.227
pp' - DDE	[illegible]	0.426	1.99	0.840
op' - DDD	ND*	ND	ND	0.310
pp' - DDD	ND	0.329	0.429	0.498
op' - DDT	ND	ND	0.344	ND
pp' - DDT	0.[illegible]2	0.484	1.[illegible]	0.606
TOTAL CHLORINATED HYDROCARBONS	1.19	1.[illegible]	4.22	2,48

* not detectable

Work performed at: Central Laboratory, County Sanitation Districts of Los Angeles County.

[illegible] CHEMICAL COMPANY

[illegible] Effluent - Grab Samples

[illegible] and 1:00 PM March 23, 1971

[illegible] Hydrocarbon Analysis

[illegible]: [illegible]

Requested by: J. Kr[illegible]er
Copy: K, Payne, J. Redner

Constituent in µg/liter \ Sample Description	9:00 AM	1:00 PM	
[illegible]	16.2	7.59	
[illegible]	52.4	29.3	
[illegible]	3.15	0.632	
[illegible]	8.49	4.13	
[illegible]	40.5	31.4	
[illegible]	183.	101.	
[illegible]	ND*	0.239	
[illegible]	ND	0.122	
[illegible]	ND	0.692	
[illegible]	302	175	

[illegible]

[illegible] County Sanitation Districts of Los Angeles County.

PESTICIDE ANALYSIS OF RAW SEWAGE

MARCH 30-31, 1970

Concentration in pr gm/l (ppb)

Sample Location*	1	2	3	4	5 Above Montrose Chemical	6 Below Montrose Chemical	6				
Sample Time Approx.	3 A.M. 8 A.M.	8A.M. 8A.M.	[illegible] A.M. [illegible] A.M.	[illegible] A.M. [illegible] A.M.	[illegible] A.M. [illegible] A.M.	[illegible] A.M. [illegible] A.M.	[illegible]AM 2PM	2 PM 8 PM	[illegible] 2AM	2AM 8AM	Weighted Avg.
BHC	0.072	0.405	0.341		0.317						
Lindane		0.272	0.045		0.2[illegible]7						
Heptachlor	0.174	1.16	0.069		0.475		0.51				< 1
Aldrin	0.209	2.93	0.079		0.319						
Dieldrin	0.187										
Toxaphene	0.180										
op' - DDE	0.989	34.0	2.49	[illegible].3	3.52	253	79.9	89.5	163	635	210
pp' - DDE	2.73	15	12.1	496	15.5	4[illegible]	183	225	436	1053	429
op' - DDD		21.2		19.0		132					
pp' - DDD	0.097		1.09	41.6	2[illegible]	55.7			23.2	52.1	16
op' - DDT	1.33	50.0	2.59	344	3.75	921	14[illegible]	373	51[illegible]	2190	696
pp'-DDT.	2.24	3.73	[illegible]	633	[illegible].63	122[illegible]	729	[illegible]2	[illegible]	2157	383
Kethane	4.09				[illegible].0						
Total	12.3	229	[illegible].2	56[illegible]	46.[illegible]	295[illegible]	[illegible]0	160	[illegible]	6102	2234

This also reflects Montrose Chem.

Note: No entry indicates concentration below minimum detection limit.

Identifications presumptive

*Sample locations:

1. JO"A", Unit 3A, Pon[illegible] [illegible] Fries, Sta 6[illegible]+9[illegible].35 Dwg J.O.-d-24
2. JO"B", Unit 1A, Fries [illegible] Realty , Sta 53+7[illegible].00 Dwg J.O.-p-41
3. JO"C", Unit 1, 2nd [illegible] East of [illegible], Sta [illegible]+55.33 Dwg J.O.-p-50
4. JO"D", Unit 1, 230th St. & Fig[illegible], Sta 4[illegible]+1[illegible].[illegible] Dwg J.O.-p-39
5. Dist. 5 Interceptor, [illegible] Fre[illegible]. [illegible], Montrose Chem. Co. Sta 56+87.64 Dwg-5-p-64
6. Dist. 5 Interceptor, South of [illegible]rose Chem. Co. Sta [illegible]6+50.00 Dwg 5-p-64

ABANDONED CHEMICAL WASTE DISPOSAL SITE SURVEY

We are conducting a survey to locate abandoned and/or inactive chemical waste disposal sites in California. As part of this effort, we are contacting all currently operating industries which could produce chemical wastes to determine both current and past chemical waste disposal practices.

Below is a survey form to help collect information which will be used to locate and evaluate disposal sites. Your cooperation in completing this form is appreciated. If you are completing this for several plants, please use a separate form for each plant your company has operated and/or currently operates in California. If you do not have adequate space, please use another sheet of paper and identify responses by the question number.

Please return the completed survey form by ______________________

If you have any questions, please call or write to the Department of Health Services, Hazardous Materials Management Section, 744 P Street, Sacramento, CA 95814, (916) 323-3559. If necessary, trade secrets may be protected by indicating the number of the response you wish to remain confidential: ______________________

1. Company Name STAUFFER CHEMICAL CORP. - MONTROSE CHEMICAL CORP. TORRANCE PLANT

   Mailing Address 3152 E. CENTURY BLVD.
   Number Street

   LYNWOOD, CA 90262
   City Zip

   Location (if different than above) ______________________
   Number Street

   LOS ANGELES CO
   City County Zip

2. Years of operation at this location 33 YRS

3. If a subsidiary, name and mailing address of parent company

   ____
   Name Number Street

   ____
   City State Zip

4. List Standard Industrial Classification (SIC) codes for principle products

Product	SIC Code	Percent of Production
	2898	

5. Do you have Waste Discharge Requirements issued by a Regional Water Quality Control Board for any on-site disposal?
   ☐ Yes ☐ No

   If yes, date you received the requirements ______________________
   Were your disposal practices any different before receiving the Discharge Requirements? ☐ Yes ☐ No

   If yes, explain ______________________

6. **Please complete for all major chemical wastes produced at this plant. Using** the key below, indicate method of disposal **used for each chemical** and whether disposed of on or off site. If you have submitted an application for a Hazardous Waste **Facility Permit, indicate** the submittal date under the section titled Current Disposal Practices and do not complete that **section. If you have** not submitted an application for a Hazardous Waste Facility Permit, please complete the section. If **you would like information** about the Hazardous Waste Facility permitting program, please check here. ☐

KEY: A — on site disposal B — off site disposal

1 — Recycling	4 — Containerized for storage/transit	7 — Land disposal	10 — Well
2 — Treatment	5 — Pour down sewer/storm drain	8 — Ponds	11 — Mineshaft
3 — Incineration	6 — Injection well	9 — Pits	12 — Unknown

Name/Type of Chemical	Disposal Method Pre-1972 Disposal Practices	Disposal Method Current Disposal Practices
ORGANICS	A? B.12	A? B? 100% - 7
PESTICIDES & INTERMEDIATES		
MISC		
CONTAINERS, HOXS, WEEDS, DRUMS,		
GENERAL PLANT REFUSE;		

7. **Please complete for any** wastes disposed of off site before 1972.

Location of Site	Name of Hauler	Approximate Time Period Site Used
3152 E. CENTURY BLVD LYNWOOD, CA 90262	THOMAS DUMP TRUCK SERVICE, INC.	1950 - 1961

8. **Are there any inactive** chemical waste disposal sites on the plant property? ☐ Yes ☐ No ☒ Unknown

If yes, indicate type(s) of disposal site(s). ☐ Incinerator ☐ Ponds ☐ Pits ☐ Well ☐ Containers ☐ Injection Well ☐ Mineshaft ☐ Land Disposal

9. **List names and location** of any other plants your company operates or has operated in California since 1945.

Name	Location

Survey completed by ______

Phone ( )

NOTE

AI UNKNOWN LOCATION

...pany Name: Stauffer Chemical Company
...cility Name: Montrose Chemical Corp. of Calif. - Torrance Plant (Affiliate)
...e of Hauling Firm/Contractor: Toombs Dump Truck Service, Inc.
...dress: (no.) 3152 E. (street) Century Blvd.
(city) Lynwood (state) Calif. (zip code) 90262

3272

Year first used .... 19 [5][0] (10-11)
Year last used (enter "79" if still in use) .... 19 [6][1] (12-13)
Total amount of process waste hauled from this facility:
thousand gallons .... [ ][ ][ ][ ][ ][ ][ ][0] (14-21)
hundred tons................ [ ][ ][ ][ ][ ][ ][7][8] (22-28)
thousand cubic yards ...... [ ][ ][ ][ ][ ][ ][ ][0] (29-36)

Components (or characteristics) of process waste from this facility disposed at site: (1=present in waste; 2=not present in waste; 9=don't know):
FILL IN EVERY BLOCK SPACE

Acid solutions, with pH<3 .... [2] (37)
pickling liquor .... [2] (38)
metal plating waste .... [2] (39)
circuit etchings .... [2] (40)
inorganic acid manufacture .... [2] (41)
organic acid manufacture .... [2] (42)
Base solutions, with pH>10 .... [2] (43)
caustic soda manufacture .... [2] (44)
nylon and similar polymer generation .... [2] (45)
scrubber residual .... [2] (46)
Heavy metals & trace metals (bonded organically & inorganically) .... [2] (47)
arsenic, selenium, antimony .... [2] (48)
mercury .... [2] (49)
iron, manganese, magnesium .... [2] (50)
zinc, cadmium, copper, chromium (trivalent) .... [2] (51)
chromium (hexavalent) .... [2] (52)
lead .... [2] (53)
Radioactive residues, >3 pico curies/liter .... [2] (54)
uranium residuals & residuals for UF_6 recycling .... [2] (55)
lathanide series elements and rare earth salts .... [2] (56)
phosphate slag .... [2] (57)
thorium .... [2] (58)
radium .... [2] (59)
other alpha, beta & gamma emitters .... [1] (60)
Organics.. [illegible] (61)
[illegible] (62)

M10-3-3

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7128
LOS ANGELES, CA 90012
(213) 620-2380

April 2, 1984

Ms. Linnea Samanc
1129 West 204th Street
Torrance, CA 90502

Dear Ms. Samanc:

Enclosed please find a tabulation of the analytical results for the tap water samples obtained on March 1, 1984, from several homes in your community.

The results show absence of DDT and DDE. The other contaminants found (chloroform, bromodichloromethane, chlorodibromomethane) are generally termed trihalomethanes (THM's) which are known to result from the chlorination of water. The levels found are well within the drinking water standard of 100 $\mu g/l$ (ppb) for THM's.

Please call me if you have additional questions.

Sincerely,

Nestor Acedera
Southern California Section
Toxic Substances Control Division

Enclosure

cc: Gary Yamamoto
SEB
1449 Temple Street
Los Angeles, CA 90026

bcc: Jan Meyer
Dave Chase

TAP WATER SAMPLING
COMMUNITY NEAR MONTROSE/CADILLAC FAIRVIEW SITES
MARCH 1, 1984

LOCATION	$CHCl_3$	$CHBrCl_2$	$CHBr_2Cl$	TOTAL	ALLOWABLE
965 204th Street	28	20	8.2	56.2	100
1181 204th Street	28	20	8.2	56.2	100
1502 204th Street	24	6.5	0.75	31.2	100
1510 Del Amo Blvd.	22	7.1	0.73	29.8	100
1609 Del Amo Blvd.	20	6.9	0.61	27.5	100
20437 Kenwood	23	18	7.4	48.4	100

(NOTE: Concentration units are in $\mu g/l$)

$CHCl_3$ - Chloroform

$CHBrCl_2$ - Bromodichloromethane

$CHBr_2Cl$ - Chlorodibromomethane

Residential / Tap . Water

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): Dominguez WC

System Number: 19

Serial Number: C 10431

Sampling Point: 965 204th St, Torrance

Collected by: Chae Toxics

Date and Hour Collected: 3/1/84 10:10

Type of Sample: Raw Surface Water / ☒ Drinking Water (Raw / ☒ Treated) / Waste water (Raw / Chlorinated) / Trade Waste / Other

Send Report To: WSS Dist. # / DOT Dist. # / RWQCB # / County HD / National Park Serv. / Other

Results are expressed as mg/l unless specified

GENERAL MINERAL ANALYSIS: Ca, Mg, Fe Total, Mn, Na, K, pH, Total Dissolved Solids, Hard., HCO₃, CO₃, OH, Total Alk., Cl, SO₄, F, NO₃

TRACE ELEMENTS: Al, As, B, Cd, Cr, Cu, Hg, Pb, Ni, Se, Zn

☒ Other analyses desired (specify): VOA Scan - Primary Pollutants

(Give Copy to Yamamoto)

Date Reported | Analyst

Turb. | BOD | Susp. Solids | PO₄ | Spec. Cond. | Grease | Set. Solids | MBAS

Form LAB 100 (2/80)

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Date Received | Lab No. | Leave Blank

Purveyor and Address (include city and county): Dominguez WC

System Number: 19

Serial Number: C 10429

Sampling Point: 1171 204th St Torrance

Collected by: Chae Toxics

Date and Hour Collected: 3/1/84 9:45

Type of Sample: Raw Surface Water / ☒ Drinking Water (Raw / ☒ Treated) / Waste water (Raw / Chlorinated) / Trade Waste / Other

Send Report To: WSS Dist. # / DOT Dist. # / RWQCB # / County HD / National Park Ser. / Other

Results are expressed as mg/l unless specified

GENERAL MINERAL ANALYSIS: Ca, Mg, Fe Total, Mn, Na, K, pH, Total Dissolved Solids, Hard., HCO₃, CO₃, OH, Total Alk., Cl, SO₄, F, NO₃

TRACE ELEMENTS: Al, As, B, Cd, Cr, Cu, Hg, Pb, Ni, Se, Zn

☒ Other analyses desired (specify): VOA Scan - Primary Pollutants

(Give Copy to Yamamoto)

Date Reported | Analyst

Turb. | BOD | Susp. Solids | PO₄ | Spec. Cond. | Grease | Set. Solids | MBAS

Form LAB 100 (2/80)

Sanitation and Radiation Laboratory
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Field	Value
Date Received	3/1/84
Lab No (Leave Blank)	11408
Purveyor and Address (include city and county)	Dominguez WC
System Number	19
Serial Number	C 10430
Sampling Point	1181 204th St Torrance
Collected by	Chase - Torres
Date and Hour Collected	3/1/84 9:45

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ County HD ☐ DOT Dist # ☐ National Park Serv ☐ RWQCB # ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☒ Other analyses desired (specify)

DDT, DDE = none detected

(Give Copy to Yamamoto)

Date Reported	Analyst
3-15-84	[illegible]

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp Solids ☐ PO_4 ☐ Spec Cond µmhos/cm ☐ ORG N ☐ Grease ☐ Set Solids ml/l/hour ☐ MBAS

Form LAB 800 (2 80)

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Field	Value
Date Received	3/1/84
Lab No (Leave Blank)	[illegible] 410
Purveyor and Address (include city and county)	Dominguez WC
System Number	19
Serial Number	C 10432
Sampling Point	965 204th St. Torrance
Collected by	Chase - Torres
Date and Hour Collected	3/1/84 10:10

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ County HD ☐ DOT Dist # ☐ National Park Serv ☐ RWQCB # ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☒ Other analyses desired (specify)

DDT, DDE = none detected

(Give Copy to Yamamoto)

Date Reported	Analyst
3-15-84	[illegible]

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp Solids ☐ PO_4 ☐ Spec Cond µmhos/cm ☐ ORG N ☐ Grease ☐ Set Solids ml/l/hour ☐ MBAS

Form LAB 800 (2 80)

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): LA City

System Number: 19

Serial Number: C 10435

Sampling Point: 1510 Del Amo Blvd. Tunnel

Collected by: Chase - Toxic

Date and Hour Collected: 3-1-84 11:00

Type of Sample: ☐ Raw Surface Water ☑ Drinking Water ☐ Raw ☑ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☐ County HD ☐ National Park Serv ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS — TRACE ELEMENTS

☑ Other analyses desired (specify): VOA Scan - Primary Pollutants

(Give Copy to Yamamoto)

Date Reported | Analyst

Form LAB 800 (2-80)

State of California - Department of Health Services
Sanitation and Radiation Laboratory, Sect.
Southern California Laboratory, Sect.

Date Received | Lab No.

SAMPLE FOR CHEMICAL ANALYSIS

(Leave Blank)

Purveyor and Address (include city and county): Dominguez W C

System Number: 19

Serial Number: C 10433

Sampling Point: 20437 Kenwood St Ave

Collected by: Chase-Toxics

Date and Hour Collected: 3-1-84 10:35

Type of Sample: ☐ Raw Surface Water ☑ Drinking Water ☐ Raw ☑ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☐ County HD ☐ National Park Serv. ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS — TRACE ELEMENTS

☑ Other analyses desired (specify): VOA Scan - Primary Pollutants

(Give Copies to Yamamoto)

Date Reported | Analyst

Form LAB 800 (2-80)

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Date Received: 3/1/84
Lab No: 11412 (Leave Blank)
Purveyor and Address (include city and county): Dominguez W.C.
System Number: 19
Serial Number: C 10434
Sampling Point: 20437
Collected by: CHASE - TOXICS
Date and Hour Collected: 3-1-84 10:40

Type of Sample: Drinking Water (X), Treated (X)

Results are expressed as mg/l unless specified

GENERAL MINERAL ANALYSIS — TRACE ELEMENTS

Other analyses desired (specify): (X)
DDT, DDE = none detected

Date Reported: 3-15-84
Analyst: K

Form LAR 800 (2 80)

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Date Received: 3/1/84
Lab No: 114?? (Leave Blank)
Purveyor and Address (include city and county): LA City
System Number: 19
Serial Number: C 10436
Sampling Point: 1510 Del Amo Blvd, Torrance
Collected by: CHASE - TOXICS
Date and Hour Collected: 3-1-84 11:05

Type of Sample: Drinking Water (X), Treated (X)

Results are expressed as mg/l unless specified

Other analyses desired (specify): (X)
DDT, DDE = none detected

(Give Copy to Yamamoto)

Date Reported: 3-15-84
Analyst: K

BOE-C6-0178352

Purveyor and Address (include city and county)
~~160~~ LA City

System Number: 19

Serial Number: C 10439

Sampling Point: 1609 Del Amo Blvd, Torrance

Collected by: Chase - Toxics

Date and Hour Collected: 3-1-84 11:15

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste Water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ County HD ☐ DOT Dist # ☐ National Park Serv. ☐ RWQCB # ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS — mg/l as $CaCO_3$: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn

☒ Other analyses desired (specify)

VOA SCAN - Priority Pollutants

[illegible] = [illegible]

[illegible] = [illegible] ug/l

[illegible] = 0.01 ug/l

Date Reported: [illegible]

Analyst: [illegible]

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. ☐ Org N ☐ Grease ☐ Set Solids ☐ MBAS

Form LAB 800 (2 80)

State of California Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Date Received:

Lab No.: (Leave Blank)

Purveyor and Address (include city and county)
LA City

System Number: 19

Serial Number: C 10437

Sampling Point: 1502 204th St, Torrance

Collected by: Chase - Toxics

Date and Hour Collected: 3-1-84 11:15

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste Water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ County HD ☐ DOT Dist # ☐ National Park Serv ☐ RWQCB # ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS — mg/l as $CaCO_3$: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn

☒ Other analyses desired (specify)

VOA - SCAN PRIMARY POLLUTANTS

[illegible] = [illegible]

[illegible] = 0.5 ug/l

[illegible] = 0.75 ug/l

(Give Copy to Yamamoto)

Date Reported: [illegible]

Analyst: [illegible]

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. ☐ Org N ☐ Grease ☐ Set Solids ☐ MBAS

Form LAB 800 (2 80)

GW 27 01

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): LA City	Date Received: 3/1/84	Lab No (Leave Blank): 11416
	System Number: 19	Serial Number: C 10438
Sampling Point: 1502 204th St, Torrance	Collected by: Chase - Toxics	Date and Hour Collected: 3-1-84 11:20

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☐ County HD ☐ National Park Serv ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids; mg/l as $CaCO_3$: ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn

☒ Other analyses desired (specify)

DDT, DDE = none detected

(Give Copy to Yamamoto)

Date Reported	Analyst
3-15-84	AT

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. ☐ ORG-N ☐ Grease ☐ Set. Solids ☐ MBAS

Form LAR 800 (2-80)

State of California - Department of Health Service
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): LA City	Date Received: 3/1/84	Lab No (Leave Blank): 11417
	System Number: 19	Serial Number: C 10440
Sampling Point: 1609 Del Amo Blvd Torrance	Collected by: Chase - Toxics	Date and Hour Collected: 3-1-84 11:50

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☒ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☐ County HD ☐ National Park Serv ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids; mg/l as $CaCO_3$: ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn

☒ Other analyses desired (specify)

DDT, DDE = none detected

Date Reported	Analyst
3-15-84	AT

☐ Turb ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. ☐ ORG-N ☐ Grease ☐ Set. Solids ☐ MBAS

BOE-C6-0178354

MK-A-D

COUNTY OF LOS ANGELES • DEPARTMENT OF HEALTH SERVICES

313 NORTH FIGUEROA STREET • LOS ANGELES, CALIFORNIA 90012

DHS

PUBLIC HEALTH PROGRAMS

DOUGLAS R. STEELE
Deputy Director

MARTIN D. FINN, M.D., M.P.H.
Medical Director

Reply refer to:
2615 South Grand Avenue, Room 607
Los Angeles, CA 90007
(213) 744- 3223

August 23, 1983

John R. Foth
Operations Manager
Dominguez Water Corporation
21718 S. Alameda Street
Long Beach, California 90810

SUBJECT: CADILLAC-FAIRVIEW NEIGHBORHOOD WATER TESTS

Dear Mr. Foth:

Included are the test data for the five (5) area residents and Dominguez Water Corporation's Well #19. Please be advised that all tests were negative.

If you need further information, please call (213) 744-3223.

Very truly yours,

R. L. Dennerline

R. L. Dennerline, Chief
Occupational Health

RLD:DF:s

Enclosures

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): DOMINGUEZ WATER COMP, CARSON, L.A.	Date Received: 7-8-83	Lab. No (Leave Blank): 9589
Sampling Point: 21718 [illegible]AMEDA AVE CARSON	System Number:	Serial Number: C 2003
	Collected by: D. FRESQUEZ	Date and Hour Collected: 7/7/83 [illegible]

Type of Sample: ☐ Raw Surface Water ☑ Drinking Water ☐ Raw ☐ Treated ☐ Waste water ☑ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other ____

Send Report To: ☐ WSS Dist. # ____ ☐ DOT Dist. # ____ ☐ RWQCB # ____ ☑ County HD ☐ National Park Serv. ☐ Other ____

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS

		(mg/l as Ca CO_3)	
☐ Ca		☐ Hardness	
☐ Mg		☐ HCO_3	
☐ Fe Total		☐ CO_3	
☐ Mn		☐ OH	
☐ Na		☐ Total Alk	
☐ K		☐ Cl	
☐ pH		☐ SO_4	
☐ Total Dissolved Solids		☐ F	
		☐ NO_3	

TRACE ELEMENTS

☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☒ Other analyses desired (specify)

STYRENE = [illegible]
[illegible]LUURENE = " "
DDT = " "
NAPTHALENE = " "
[illegible]
TOLUENE [illegible]
BENZENE [illegible]

Date Reported	Analyst
7-12-83	H. [illegible]

☐ Turb TU	☐ NH_3-N	☐ BOD	☐ Susp Solids	☐ PO_4
☐ Spec. Cond. µmhos/cm	☐ ORG N	☐ Grease	☐ Set Solids ml 1/hour	☐ MBAS

Form LAB 800 (2-80)

State of California · Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): LA County Hazardous Waste Prog	Date Received: 7-7-83	Lab No. (Leave Blank): 9569
Sampling Point: 958 Del Amo Bl. # DF#5	System Number:	Serial Number: C 20027
	Collected by: D. Fresquez	Date and Hour Collected: 7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist. # ☐ LOT Dist. # ☐ RWQCB # ☒ County HD ☐ National Park Serv. ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk. ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☐ Other analyses desired (specify):
Benzene =
Toluene =
Ethylbenzene -
Napthalene =
Styrene =
Fluorene
DDT =

Date Reported: 7-12-83
Analyst:

☐ Turb TU ☐ Spec. Cond µmhos/cm ☐ NH_3-N ☐ ORG-N ☐ BOD ☐ Grease ☐ Susp. Solids ☐ Set Solids ml/l/hour ☐ PO_4 ☐ MBAS

Form LAB 600 (2-80)

State of California · Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section
SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): LA County Hazardous Waste Prog	Date Received: 7-7-83	Lab No. (Leave Blank): 9570
Sampling Point: 15600 S. Vermont DF#6	System Number:	Serial Number: C 20028
	Collected by: D. Fresquez	Date and Hour Collected: 7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist. # ☐ DOT Dist. # ☐ RWQCB # ☒ County HD ☐ National Park Serv. ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk. ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☐ Other analyses desired (specify):
Benzene =
Toluene =
Ethylbenzene =
Napthalene =
Styrene =
Fluorene =
DDT =

Date Reported: 7-12-83
Analyst:

☐ Turb TU ☐ Spec. Cond µmhos/cm ☐ NH_3-N ☐ ORG-N ☐ BOD ☐ Grease ☐ Susp. Solids ☐ Set Solids ml/l/hour ☐ PO_4 ☐ MBAS

Form LAB 600 (2-80)

State of California - Department of Health
Sanitation and Radiation Laboratory
Southern California Laboratory
SAMPLE FOR CHEMICAL ANALYSIS

Date Received	7-7-83 (Leave Blank)
Lab No.	9565
Purveyor and Address (include city and county)	L.A. County Hazardous Waste Prog.
System Number	
Serial Number	C 1414
Sampling Point	1129 204th St. DF#1
Collected by	D. Fresquez
Date and Hour Collected	7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water: ☐ Raw ☐ Treated ☐ Wastewater ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist. # ☐ DOT Dist. # ☐ RWQCB # ☒ County HD ☐ National Park Serv. ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids; (mg/l as $CaCO_3$) ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk. ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☒ Other analyses desired (specify):
Benzene = [illegible]
Toluene = [illegible]
Ethylbenzene = " "
[redacted]
Napthalene = " "
Styrene = " "
[redacted]
Fluorene = " "
DDT = " "

Date Reported	7-[illegible]-83
Analyst	[illegible]

☐ Turb. TU ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. µmhos/cm ☐ ORG N ☐ Grease ☐ Set Solids ml/l/hour ☐ MBAS

Form LAB-800 (4/74)

State of California - Department of Health
Sanitation and Radiation Laboratory
Southern California Laboratory
SAMPLE FOR CHEMICAL ANALYSIS

Date Received	7-7-83 (Leave Blank)
Lab No.	9566
Purveyor and Address (include city and county)	L.A. County Hazardous Waste Prog.
System Number	
Serial Number	C 1415
Sampling Point	1121 W. 204th St. DF#2
Collected by	D. Fresquez
Date and Hour Collected	7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Wastewater ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist. # ☐ DOT Dist. # ☐ RWQCB # ☒ County HD ☐ National Park Serv. ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS: ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids; (mg/l as $CaCO_3$) ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk. ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☐ Other analyses desired (specify):
Benzene = [illegible]
Toluene = [illegible]
Ethylbenzene = [illegible]
Napthalene = [illegible]
Styrene = [illegible]
Fluorene = [illegible]
DDT = [illegible]

Date Reported	[illegible]
Analyst	[illegible]

☐ Turb. TU ☐ NH_3-N ☐ BOD ☐ Susp. Solids ☐ PO_4 ☐ Spec. Cond. µmhos/cm ☐ ORG N ☐ Grease ☐ Set Solids ml/l/hour ☐ MBAS

Form LAB-800 (4/74)

State of California Department of Health
Sanitation and Radiation Laboratory
Southern California Laboratory

SAMPLE FOR CHEMICAL ANALYSIS

Date Received	7-7-83
Lab No (Leave Blank)	7567
Purveyor and Address (include city and county)	LA County Hazardous Waste Prog
System Number	
Serial Number	C 1592
Sampling Point	1043 1/2 W. 204th St DF#3
Collected by	D. Fresquez
Date and Hour Collected	7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Wastewater ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☒ County HD ☐ National Park Serv ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☐ Other analyses desired (specify)

Benzene -
Toluene
Ethylbenzene
Napthalene
Styrene
Fluorene
DDT

Date Reported: 7-...-83
Analyst:

☐ Turb TU ☐ NH_3 N ☐ BOD ☐ Susp Solids ☐ PO_4
☐ Spec Cond μmhos/cm ☐ ORG N ☐ Grease ☐ Set Solids ☐ MBAS

Form LAB-800 (4/74)

State of California Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Date Received	7-7-83
Lab No (Leave Blank)	7568
Purveyor and Address (include city and county)	LA County Hazardous Waste Prog.
System Number	
Serial Number	C 2002
Sampling Point	951 W. 204th St DF#4
Collected by	D. Fresquez
Date and Hour Collected	7-6-83

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trade Waste ☐ Other

Send Report To: ☐ WSS Dist # ☐ DOT Dist # ☐ RWQCB # ☒ County HD ☐ National Park Serv ☐ Other

Results are expressed as mg/l unless specified

☐ GENERAL MINERAL ANALYSIS (mg/l as $CaCO_3$): ☐ Ca ☐ Mg ☐ Fe Total ☐ Mn ☐ Na ☐ K ☐ pH ☐ Total Dissolved Solids ☐ Hardness ☐ HCO_3 ☐ CO_3 ☐ OH ☐ Total Alk ☐ Cl ☐ SO_4 ☐ F ☐ NO_3

TRACE ELEMENTS: ☐ Al ☐ Ag ☐ As ☐ B ☐ Cd ☐ Cr ☐ Cu ☐ Hg ☐ Pb ☐ Ni ☐ Se ☐ Zn ☐

☒ Other analyses desired (specify)

Benzene
Toluene
Ethylbenzene
Napthalene
Styrene
Fluorene
DDT

Date Reported: 7-...-83
Analyst:

AB ... (2 80)

BOE-C6-0178359

-6

WATER TESTS FOR AREA RESIDENTS AND WELL #19

TEST	951 W. 204th Street	1043½ W204th St.	1121 W. 204th St.	1129 W. 204th St.	950 Del Amo Blvd.	Well #19 400 E. Carson	Control	1710 Alameda Ave.
NZENE	ND	ND	ND	ND	ND	ND	ND	
LUENE	ND	ND	ND	ND	ND	ND	ND	
HYLBENZENE	ND	ND	ND	ND	ND	ND	ND	
YRENE	ND	ND	ND	ND	ND	ND	ND	
JORENE	ND	ND	ND	ND	ND	ND	ND	
	ND	ND	ND	ND	ND	ND	ND	

Taken at residents homes
Untreated water from Well #19.

3286

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7128
LOS ANGELES, CA 90012
(213) 620-2380

AUG 10 1983

Ralph S. Tufenkian
Western Waste Industries
P.O. Box 214
Gardena, CA 90247

Dear Mr. Tufenkian:

ANALYSES OF SAMPLES TAKEN JUNE 7, 1983, AT DEL AMO AND VERMONT EXCAVATION SITE

We have enclosed a clear copy of the results of our laboratory analyses of field samples which Roy Thielking of my staff split with your representative on June 7, 1983.

We apologize for any inconvenience which may have been caused by the previous copy being unclear.

If you have any questions, please call Harry Sneh of my staff at the letter head number.

Sincerely,

for Miller E. Chambers

John A. Hinton, P.E.
Regional Administrator
Southern Region
Permits, Surveillance and
Enforcement Section
Hazardous Waste Management Branch

Enclosure

cc: Mark Galloway
Harry Sneh

LABORATORY REPORT

Hazardous Materials Unit
Southern California Laboratory Section

To : Kay Huiking
SCL No. : 1736 - 43
Sampling No : 51 - 58
Date of Report: 6/17/83
Sample Location: Western Kinsel
[illegible] Ave: E Vermont

...tical Procedures Used: Samples were extracted w/ CS2, then analyzed for Styrene & naphthalene by GC w/ FID detector

Analysis Results:

SCL #	Field #	Styrene	Naphthalene
1736	51	<5 mg/kg	4.1 mg/kg
1737	52	<5 "	<4 "
1738	53	<5 "	13 "
1739	54	<5 "	<4 "
1740	55	<5 "	8.0 "
1741	56	28 "	570 "
1742	57	4.5 "	240 "
1743	58	82 "	860 "

Analysts' Signatures: Norma Castillo 6/13/83 Date

Date

Supervising Chemist's Signature: Erlinda A. Rabano 6/13/8 Date

BOE-C6-0178362

SOUTHERN CALIFORNIA LABORATORY SECTION
HAZARDOUS MATERIALS MANAGEMENT UNIT

LABORATORY REPORT

SCL NO.: 1742-1743

DATE OF REPORT: 6/17/83

TO: Roy Ohelking

SAMPLING DATE: 6/7/83

SAMPLING BY: 57-58

DATE RECEIVED: 6/8/83

SAMPLE LOCATION: Western Refuse
Del Amo & Vermont

ANALYTICAL PROCEDURES USED: Headspace vapor analyzed directly by GC/MS; headspace from each sample was also drawn by vacuum through charcoal tubes, the charcoal desorbed in carbon disulfide, and the CS_2 solutions analyzed by GC/MS. Organic

REFERENCE: components were identified by mass spectra.

ANALYSIS RESULTS: Major components in SCL 1742 were benzene, toluene, ethylbenzene, diethylbenzene, and naphthalene. Minor components were styrene, cumene, propylbenzene, ethyltoluene, isobutylbenzene, sec-butylbenzene, indan, indene, 1-methylindan and 1-methylnaphthalene.

SCL 1743 - Major components were benzene, toluene, ethylbenzene, styrene, indene, 1-methylindene, and naphthalene. Minor components were methylcyclohexane, cumene, allylbenzene, propylbenzene, ethyltoluene, trimethylbenzene, isobutylbenzene, sec-butylbenzene, isopropenylbenzene, methylstyrene, indan, diethylbenzene, 1-methylindan, 1,1-dimethylindene, 2-methylnaphthalene, 1-methylnaphthalene, and biphenyl.

ANALYSTS' SIGNATURES:

William A. Nilsson June 16, 1983
date

date

* No butadiene was found in either sample.

Copies to:

SOUTHERN CALIFORNIA LABORATORY SECTION
HAZARDOUS MATERIALS MANAGEMENT UNIT

LABORATORY REPORT

SCL NO.: 1736-1741

DATE OF REPORT: 6/17/83

TO: Roy Thelking

SAMPLING DATE: 6/7/83

SAMPLING NO: 51-56

DATE RECEIVED: 6/8/83

SAMPLE LOCATION: Western Refuse
Del Amo and Vermont

ANALYTICAL PROCEDURE USED: GC/MS analysis of headspace vapor directly; headspace vapor was also drawn from each sample by vacuum through charcoal tubes for 15-20 minutes and the charcoal desorbed in carbon disulfide. The solution

REFERENCE: were then analyzed by GC/MS, organic components identified by mass spectra.

ANALYSIS RESULTS: SCL 1736 - Nothing was detected.
SCL 1737, 1738, and 1739 contained small traces of petroleum distillate.
SCL 1740 contained small amounts of ethylbenzene, naphthalene, diethylbenzene and petroleum distillate.
SCL 1741 contained considerably more organic substance than did the other five samples. The major components were ethylbenzene, styrene, diethylbenzene, naphthalene, indene, and 1-methylindene.
Minor components were toluene, cumene, propylbenzene, ethyltoluene, trimethylbenzene, isobutylbenzene, sec-butylbenzene, allylbenzene, isopropenylbenzene, methylstyrene, 1,1-dimethylindene, 1-methylindan, both methylnaphthalenes, and biphenyl.

ANALYSTS' SIGNATURES:

William Nilsson — date: June 16, 1983

date

* No butadiene was detected in any of the samples.

Copies to:

BOE-C6-0178364

Fire [illegible]rant samples in area

MONTGOMERY LABORATORIES

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

JUL 7 1983

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Dominguez Water Corporation Job/P.O. No.: 280.0050

Sample Description:	204th & Raymond	204th & New Hampshire
Laboratory No.:	D60923	D60924
Sampling Date:	June 27, 1983	June 27, 1983
Date Received:	June 27, 1983	June 27, 1983
Date Analyzed:	June 29, 1983	June 29, 1983

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Chloroform	19	18
Bromodichloromethane	22	23
Dibromochloromethane	10	11
Bromoform	0.6	0.7
1,1,1-Trichloroethane	NQ	NQ

NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By [signature] Checked By [signature]

L02FM30630

MONTGOMERY LABORATORIES

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Dominguez Water Corporation Job/P.O. No.: 280.0050

	FIRE HYDRANT	FIRE HYDRANT
Sample Description:	204th & Raymond	204th & New Hampshire
Laboratory No.:	D60923	D60924
Sampling Date:	June 27, 1983	June 27, 1983
Date Received:	June 27, 1983	June 27, 1983
Date Analyzed:	June 29, 1983	June 29, 1983

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Chloroform	19	18
Bromodichloromethane	22	23
Dibromochloromethane	10	11
Bromoform	0.6	0.7
1,1,1-Trichloroethane	NQ	NQ

NQ: Not Quantifiable: detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By [signature] Checked By [signature]

L02RM30630

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

L02RM30630

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
~~1,1,1-Trichloroethane~~	~~0.1~~		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

LCCRM30630

SANITARY ENGINEERING
JUL - 5 1983

State of California - Department of Health Services
Sanitation and Radiation Laboratory Section
Southern California Laboratory Section

SAMPLE FOR CHEMICAL ANALYSIS

Purveyor and Address (include city and county): Dominguez Water Co.		System Number: 19	Serial Number: C 20254
Sampling Point: Well No. 19		Collected by: M. Martinez	Date and hour Collected: 6/2/82
Date Received: 6-3-82 (Leave Blank)			Lab. No. 6022

Type of Sample: ☐ Raw Surface Water ☒ Drinking Water ☐ Raw ☐ Treated ☐ Waste water ☐ Raw ☐ Chlorinated ☐ Trace Waste ☐ Other

Send Report To: ☒ WSS Dist. # 44 ☐ County HD ☐ DCT Dist # ☐ National Park Serv ☐ RWQCB # ☐ Other

Results are expressed as mg/l unless specified

☒ GENERAL MINERAL ANALYSIS

			mg/l (as $CaCO_3$)	
Ca	30.		Hardness	109.
Mg	8.		HCO_3	122
Fe Total	<0.25		CO_3	0.
Mn	<0.02		OH	0.
Na	[illegible]		Total Alk	185.
K	3.6		Cl	22.
pH	8.1		SO_4	6.
Total Dissolved Solids	256		F	0.32
			NO_3	0.04

TRACE ELEMENTS

☐ Al	
☒ Ag	<0.001
☒ As	<0.005
☐ B	
☒ Cd	<0.001
☒ Cr	[illegible]
☒ Cu	<0.02
☒ Hg	[illegible]
☒ Pb	<0.01
☒ Ni	<0.1
☒ Se	<0.005
☒ Zn	<0.02
☐	

☒ Other analyses desired (specify):

Priority Pollutants
CN^- = None detected
(<0.001)

Date reported: 8-14-82 Analyst: RC

☐ Turb ☐ NH3-N ☐ BOD ☐ Susp. Solids ☐ PO4
☐ Spec. Cond. ☐ ORG-N ☐ Grease ☐ Set. Solids ☐ MBAS

Domingo 33
Water Co. Fe
04S/13W-17D
Well No 19

Priority Pollutant Analysis; performed in August '92 by State of California, Department of Health Services

Ca	30	ppm	Calcium
Mg	8	"	Magnesium
Fe	<0.05	"	Iron
Mn	<0.02	"	Manganese
Na	53	"	Sodium
K	3.6	ppm	Potassium
PH	8.1	—	pH
TDS	256	ppm	Total Dissolved Solids
Hard	108	ppm	Hardness
HCO_3	185	"	Bicarbonate
CO_3	0	"	Carbonate
OH	0	"	Hydroxide
Alk	185	"	Alkalinity

These constituents are normally analyzed for in what is called a General Mineral Analysis. The numbers indicated are expressed in parts per million (ppm) or milligrams per liter (mg/l). The two units are equivalent in value. The number shown for pH is unitless in that it is an expression of the water being more acidic (less than 7) or more basic or alkaline (more than 7). Natural waters have a pH range from 5.5 to 8.5, 7 being neutral.

Cl	25	ppm	Chloride
SO_4	6	"	Sulfate
F	0.32	"	Fluoride
NO_3	0.04	"	Nitrate

Ag	<0.001	ppm	Silver
As	<0.005	"	Arsenic
Cd	<0.001	"	Cadmium
Cr	<0.005	"	Chromium
Cu	<0.02	"	Copper
Hg	<0.001	"	Mercury
Pb	<0.01	"	Lead
Ni	<0.1	"	Nickel
Se	<0.005	"	Selenium
Zn	<0.02	"	Zinc

These constituents are normally analyzed for in what is called an Inorganic Chemical Analysis. The numbers expressed are in ppm or mg/l. The < means less than. What this means is that all the chemicals were detected at less than quantifiable limits. These are part of the constituents called Priority Pollutants.

Cn. Cl	<0.001	ppm	Cyanide
I	<0.2 ppb		Volatile Organics
II	<10	"	Base Neutral
III	<10	"	Pesticides
IV	<20	"	Acid Extractables

Additional Priority Pollutant Classes I through IV contain from 11 to [illegible] different constituents. See the [illegible] Priority Pollutant [illegible]. The [illegible] ppb stands for parts per billion. The numbers [illegible] for the [illegible] are the [illegible] the [illegible] in the [illegible] limits.

FILE: CADILLAC - FAIRVIEW FILE
ORIGINAL TO UNION-CARBIDE FILE
HS 9/6/83

DOMINGUEZ WATER CORPORATION
21718 SOUTH ALAMEDA STREET
P.O. BOX 9351
LONG BEACH, CALIFORNIA 90810

Hazardous ... MAR 29 1982 California Department of Health Services LOS ANGELES

March 22, 1982

Department of Health Services
Sanitary Engineering Section
P.O. Box 30327, Terminal Annex
Los Angeles, CA 90030

Attention: Mr. Miller Chambers

Enclosed are the results of the Base/Neutral Analysis performed on Dominguez Water Corporation Well No. 32 located in Torrance. The State Well Number is 4S/14W-10D03S. The analysis was performed after learning that the Union Carbide Plant in Torrance had been dumping waste material from their operations on their plant site. The results indicate only a trace of Phenanthrene and Anthracene. Other compounds in the Base/Neutral analysis were not detected. The two other compounds detected were BHT, a food preservative, and oxidized BHT. According to personnel at Environmental Research Laboratory it is not uncommon to find BHT or its oxidized state in water.

If you have any questions, please call.

Very truly yours,

DOMINGUEZ WATER CORPORATION

John R. Foth

John R. Foth
Operations Manager

JRF:dpm

Enclosure

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Dominguez Water Corporation   Job/P.O. No.: 437

Sample Description: DWC-W-32

Laboratory No.: C26981

Sampling Date: February 11, 1982

Date Received: February 12, 1982

Date Analyzed: February 26, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/liter)
Phenanthrene	0.5
Anthracene	0.1

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted by Fong-Y. Lin   Date March 15, 1982

Checked by Robert R. Clark   Date 17 March, 1982

L5/mm
460

BOE-C6-0178372

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	C26981	
2,6-Bis(1,1-dimethyl ethyl)-4-methyl phenol	(3.5)	BHT - food preservative
2,6-Bis(1,1-dimethyl ethyl)-2,5-cyclohexadiene-1,4-dione	(0.5)	BHT - Oxidized

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lai Date March 15, 1982

Checked by Robert R Clark Date 17 March, 1982

L5/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

CERTIFICATION OF ANALYSIS

Montrose Chemical Corporation
of California
P.O. Box 147
Torrance, California 90507

Attn: Guy A. Dimchele

Test Report No.: 3-03660
Date Received: 1-03-80
Date Initiated: 2-08-80
Date Completed: 2-29-80
P.O. No.: 1487

Sample Description: One (1) bottle of Sewer Water, taken on 1-3-80.

Type of Examination: CHEMICAL ANALYSES

Reference: According to Standard Methods for the Examination of Water and Wastewater, 14th Edition (1976).

Sample Preparation: The sample was prepared according to procedure.

Results:

Analyte	BTP No.	Parts Per Million Result
Solids, Suspended	5-1-031-77	3744
pH	5-1-026-77	12.72
Cyanide	5-1-121-79	0.07
Zinc	5-1-063-73	0.62
Chlorinated Hydrocarbons	5-4-010-73	8.9
Pesticides, Chlorinated	5-4-002-77	< .005

Examination by: Daniel Middleton / [illegible]
Daniel L. Middleton, B.S., Chemist

Approved by:
2-29-80
Robert T. Lottritz, B.S.
Vice President of Operations

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Montrose Chemical Corporation
of California
Box 147
Torrance, California 90507

Test Report No: 3-03234
Date Received: 10-4-79
Date Initiated: 10-5-79
Date Completed: 10-19-79

Attn: Guy A. Dimchele

Type of Examination: CHEMICAL ASSAYS

Specimen Description: One (1) bottle of sewer water sample.

Reference: Standard Methods for the Examination of Water and Wastewater, 14th Edition (1975).

Results:

Analyte	BTP No.	Parts per Million
Suspended solids	5-1-031-77	408
pH	5-1-026-77	7.2
Cyanide	5-1-121-79	<0.05
Zinc	5-1-063-75	0.24
Chlorinated Hydro-carbon	5-4-010-73	<0.002
Pesticides	5-1-002-77	<0.002
Temperature		90°F

Examination by: Greg Gelb
Gregory Gelb, B.S., Chemist

Approved by:
Bong Ja Lee, M.S., Chemist
Chemistry Team Leader
10-30-79

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The conclusions and data herein apply only to the items tested and are not indicative of the quality or condition of apparently identical or similar products. This report is submitted for the exclusive use of the addressee. No use or mention of our name or the name of any member of our staff may be made in connection with any form of advertising or other public announcement without written authorization by an officer of BIO TECHNICS LABORATORIES, INC.